



Administrative County of Middlesex.

---

# ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

FOR THE

YEARS 1939 and 1940.

---

LONDON:

HARRISON AND SONS, LTD., ST. MARTIN'S LANE, W.C.2.

*Printers to His Majesty The King.*





Administrative County of Middlesex.

---

# ANNUAL REPORT

OF THE

COUNTY MEDICAL OFFICER OF HEALTH

FOR THE

YEARS 1939 and 1940.

---

LONDON:  
HARRISON AND SONS, LTD., ST. MARTIN'S LANE, W.C.2.  
*Printers to His Majesty The King.*

1942.



TO THE CHAIRMAN, ALDERMEN AND MEMBERS OF THE  
COUNTY COUNCIL OF MIDDLESEX.

SIR, MY LORD, LADIES AND GENTLEMEN,

I have the honour to submit for your information my report upon the health and casualty services of the County Council for the two years 1939 and 1940. Pressure of urgent work, depletion of staff and other difficulties led to great delay in the preparation of the Annual Report for 1939 and, when report writing again became a possibility, it seemed wise, for reasons both of expediency and economy, to deal in one volume with the years 1939 and 1940. The report thus covers the transitional period of preparation and the first complete year of total war.

Compared with peace-time standards, this report is much reduced in size and, for reasons of national security, certain tables, figures and facts have been omitted. Many of the pages which follow deal with the development of the civil defence casualty organisation and the steps which were taken to expand the county hospitals. These services underwent their test in the autumn and winter of 1940 and proved themselves equal to the strain placed upon them.

At the outbreak of war most of the central Public Health Department was transferred to extemporised office accommodation at the headquarters of Group 6 of the London Civil Defence Region; certain sections, however, remained at Westminster, and, under these somewhat difficult conditions, administration was carried on. From 3rd September, 1939, a medical officer and an ambulance officer of my staff were continuously on duty for the control room, day and night.

The health of the people of Middlesex has been remarkably well maintained. In spite of rationing difficulties, signs of malnutrition were not apparent, and the expected outbreak of catarrhal infectious illness, associated with the poor ventilation and overcrowding of shelter life, did not materialise. The incidence of scarlet fever and of diphtheria was the lowest ever previously recorded in 1939, but both records were eclipsed in 1940. The incidence of puerperal sepsis and the mortality from this condition reached new low levels in 1939, and the maternal mortality rate for 1940 was the lowest on record. The only disquieting influence in the health of the County was a rise both in incidence of and mortality from tuberculosis; a slight rise in 1939 but one which was more definite and sustained in 1940. This is a tendency which needs to be most closely watched and early and vigorous counter-measures taken.

In my previous report I referred to the death in April, 1940, of Dr. J. Tate, the late County Medical Officer. Time has done little to soften the sense of loss; and his keen foresight and wise counsel were never more needed than they are in the difficult times through which we are now passing. It is also my sad task to record the passing of two other friends and colleagues:—Dr. J. R. McGregor, Medical Superintendent of Harefield Sanatorium from its foundation; and Miss C. A. M. Coleman, for 21 years Supervisor of Midwives. Both were loyal and valued servants of the County.

It is a pleasure to place on record the loyalty and support I have received from all members of my staff, who have carried on cheerfully and efficiently however difficult the conditions or long the hours. It is almost invidious to particularise when all have given their best, but I feel especially indebted to my deputy, Dr. Perkins, for his help in all branches of the department, to Dr. Marjorie Back for her work in connection with the midwifery and welfare services during a very difficult time, and to Dr. Ewen, who has been largely responsible for the organisation of the civil defence casualty services.

I should like also to pay tribute to my colleagues the medical officers of health of the boroughs and urban districts of Middlesex. Throughout a long and trying time of preparation and testing, they have worked with my staff and myself in a spirit of loyal collaboration and good fellowship. To them in no small measure is due the credit for the success of the casualty services of the County.

I have the honour to be,

Your obedient servant,

H. M. C. MACAULAY,  
*County Medical Officer.*

PUBLIC HEALTH DEPARTMENT,  
10, GREAT GEORGE STREET,  
WESTMINSTER, S.W.1.

*July, 1942.*

## STAFF.

## WHOLE-TIME OFFICERS.

*County Medical Officer of Health and School Medical Officer :*

J. Tate, M.R.C.S., L.R.C.P., D.P.H. (Died April, 1940)  
H. M. C. Macaulay, M.D., B.S., B.Sc., D.P.H. (Appointed May, 1940)

*Deputy County Medical Officer of Health and Deputy School Medical Officer :*

H. M. C. Macaulay, M.D., B.S., B.Sc., D.P.H. (See above.)  
A. C. T. Perkins, M.C., M.D., B.S., D.P.H. (Appointed May, 1940)

*Assistant County Medical Officers of Health :*

A. C. T. Perkins, M.C., M.D., B.S., D.P.H. (See above)  
Miss M. Back, M.D., B.S., D.P.H.  
J. O. F. Davies, M.D., B.S., D.P.H. (Appointed January, 1939)  
J. B. Ewen, M.D., Ch.B., D.P.H. (Appointed May, 1940)  
T. O. Garland, M.A., M.D., B.Ch., D.P.H. (Appointed October, 1940)

*Tuberculosis Medical Officers :*

O. Bruce, M.R.C.S., L.R.C.P.  
S. Trevor Davies, M.R.C.S., L.R.C.P.  
J. R. B. Dobson, M.B., B.S., B.Sc.  
H. Evans, M.D., Ch.B., D.P.H.  
A. S. Hall, M.A., M.B., M.R.C.P.  
G. G. Kayne, M.D., M.R.C.P.  
J. T. N. Roe, M.D., Ch.B., D.P.H.

*Assistant Medical Officers :**(Maternity and Child Welfare and School Medical Services)*

Mrs. A. M. Burn, M.B., Ch.B., D.P.H. (Retired July, 1939)  
Miss J. R. Campbell, M.B., Ch.B., D.P.H.  
Miss M. L. Campbell, M.B., B.Ch., B.A.O., D.P.H.  
J. B. Ewen, M.D., Ch.B., D.P.H. (See above.)  
Miss K. Glyn-Jones, M.R.C.S., L.R.C.P.  
W. R. H. Heddy, M.R.C.S., L.R.C.P., D.P.H., Barrister - at - Law. (Resigned December, 1939)  
†R. A. Jones, M.B., Ch.B., B.Sc., D.P.H.  
Miss E. M. Malmberg, M.B., B.S., D.P.H.  
†G. B. Matthews, M.R.C.S., L.R.C.P.  
H. W. Moir, M.B., Ch.B., D.P.H.  
Mrs. E. G. Porter, M.R.C.S., L.R.C.P., D.P.H.  
Miss M. K. Ruddy, M.D., B.S., B.Sc.  
Mrs. R. H. Shelley, M.B., B.S.  
Miss E. S. Stephen, M.B., Ch.B., D.P.H.  
†J. R. Tibbles, M.B., Ch.B., D.P.H.  
Miss G. Wilson, M.A., M.B., Ch.B., D.P.H.  
Miss C. I. Wright, M.D., B.S., D.P.H.  
Mrs. M. M. Osborn, M.R.C.S., L.R.C.P. (Appointed September, 1939)  
Miss M. M. Goudie, M.B., Ch.B. (Appointed October, 1939)  
Miss M. M. O'Connor, M.R.C.S., L.R.C.P., D.P.H. (Appointed July, 1940)  
Mrs. M. Evans, M.D., F.R.C.S. (Appointed October, 1940)

*Senior Dental Officer :*

J. F. Pilbeam, L.D.S.

*Assistant Dental Officers :*

K. T. Adamson, L.D.S. (Appointed November, 1939)  
Miss I. M. M. Cameron, L.D.S. (Appointed June, 1939)  
†A. S. Carr, L.D.S. (Appointed February, 1940)  
†S. E. Charman, L.D.S. (Appointed April, 1939)  
R. E. Cook, L.D.S.  
G. M. Davie, L.D.S.  
Mrs. A. M. Ferry, L.D.S.  
Miss F. M. Goodman, L.D.S. (part-time)  
W. G. C. Hackman, L.D.S.  
Miss C. M. Henderson, L.D.S.  
F. Jones, L.D.S.  
†R. V. Kingham, L.D.S.  
W. A. Lilley, L.D.S.  
F. J. Lord, L.D.S. (Appointed November, 1939)  
S. A. McLaren, L.D.S.  
†L. C. Mandeville, L.D.S. (Appointed May, 1939)  
R. S. Matthew, L.D.S.  
R. Maxwell, L.D.S. (Appointed May, 1939)  
Mrs. I. M. Pritchard, L.D.S.  
†E. Sharp, L.D.S.  
Mrs. F. M. Sievers, L.D.S.

*Non-medical Supervisors of Midwives :*

Miss C. A. M. Coleman, S.R.N., S.C.M. (Died April, 1939)  
Miss L. B. Young, S.R.N., S.C.M. (Appointed September, 1939)

									1939	1940
<i>Tuberculosis Visitors</i>	..	..	..	..	..	..	..	..	16	16
<i>Health Visitors and School Nurses</i>	..	..	..	..	..	..	..	..	42	42
<i>Dental Nurses and Dental Attendants</i>	..	..	..	..	..	..	..	..	20	21
<i>Midwives</i>	..	..	..	..	..	..	..	..	29	29

*Ambulance Officer for Civil Defence :*

C. H. Oliver, Barrister-at-Law.

† In H.M. Forces.



## PART-TIME OFFICERS.

*Ophthalmic Surgeons :**(Maternity and Child Welfare, School Medical Service, Certification of Blind Persons)*

Miss Jean M. Dollar, M.S., F.R.C.S., D.O.M.S.

E. F. King, M.B., Ch.B., F.R.C.S., D.O.M.S.

N. H. L. Ridley, M.A., M.B., B.Chir., F.R.C.S.

C. D. Shapland, M.B., B.S., M.R.C.P., F.R.C.S.

†H. H. Skeoch, M.B., Ch.M., F.R.C.S., D.O.M.S.

R. E. Henry, M.B., Ch.M., D.O.M.S.

J. Cole Marshall, M.D., F.R.C.S.

## HOSPITALS, INSTITUTIONS AND SANATORIA.\*

## NORTH MIDDLESEX COUNTY HOSPITAL.

*Medical Superintendent :*

Ivor Lewis, M.D., M.S., D.P.H.

*Deputy Medical Superintendent and Obstetric Surgeon :*

K. A. Hudson, M.B., Ch.M., M.R.C.O.G.

*Physicians :*

R. Kempthorne, M.A., B.M., B.Ch., M.R.C.P.

(One vacancy)

*Surgeons :*

H. O. Blauvelt, M.D., C.M., F.R.C.S.

(One vacancy)

*Obstetric Surgeons :*

A. W. Purdie, M.B., Ch.B., F.R.C.P. &amp; S.,

M.R.C.O.G.

*Pathologist :*

H. Rogers, M.D., Ch.B.

*Assistant Medical Officers :* 12.*House Officers :* 4.*Matron :*

Miss D. G. Rootham.

## REDHILL COUNTY HOSPITAL.

*Medical Superintendent :*

J. N. Deacon, M.C., M.B., B.S.

*Deputy Medical Superintendent and Senior Anaesthetist :*

†J. H. Attwood, M.B., B.S., D.A.

*Physicians :*

G. H. Jennings, M.A., M.D., M.R.C.P. (Acting Deputy Medical Superintendent from April, 1940)

L. I. M. Castleden, M.D., M.R.C.P.

*Surgeons :*

D. B. Craig, F.R.C.S., D.L.O.

F. Forty, M.B., B.S., F.R.C.S.

R. Trevor Jones, B.Sc., M.B., B.S., F.R.C.S.

(part-time).

*Obstetric Surgeons :*

E. ap I. Rosser, M.B., B.S., M.R.C.O.G.

G. A. Simpson, M.D., C.M., M.R.C.O.G.

*Pathologist :*

J. L. Hamilton-Paterson, M.D., B.S.

*Assistant Medical Officers :* 8.*House Officers :* 2.*Matron :*

Miss E. R. Wheeldon.

## CENTRAL MIDDLESEX COUNTY HOSPITAL.

*Medical Superintendent :*

H. Joules, M.D., M.R.C.P.

*Deputy Medical Superintendent and Surgeon :*

T. G. I. James, B.Sc., M.Ch., F.R.C.S.

*Physicians :*

F. Avery Jones, M.D., M.R.C.P.

A. Barham-Carter, M.D., M.R.C.P., D.P.M.

J. Sakula, M.D., M.R.C.P., D.C.H.

*Obstetric Surgeon :*

J. S. MacVine, M.B., B.S., F.R.C.S., M.R.C.O.G.

*Surgeon :*

N. M. Matheson, M.B., B.Ch., F.R.C.S., M.R.C.P.

*Pathologists :*

†J. D. A. Gray, B.Sc., M.B., Ch.B., F.R.C.P., D.P.H.

W. Pagel, M.D.

R. G. Bannerman, M.D.

*Assistant Medical Officers :* 10.*House Officers :* 2.*Matron :*

Miss B. Gebhard.

\* Staff as on 31st December, 1940.

† In H.M. Forces.

## HILLINGDON COUNTY HOSPITAL.

*Medical Superintendent :*

W. A. Steel, M.D., F.R.C.P.

*Deputy Medical Superintendent and Physician :*

E. B. Jackson, M.D., M.R.C.P.

*Surgeon :*

L. Fatti, M.B., B.S., F.R.C.S.

*Obstetric Surgeon :*

Miss J. Morgan, M.D., B.Sc., M.R.C.O.G.

*Assistant Medical Officers :* 6.*House Officers :* 3.*Matron :*

Miss E. S. Laing.

## WEST MIDDLESEX COUNTY HOSPITAL.

*Medical Superintendent :*

J. B. Cook, M.D., Ch.B., D.P.H.

*Deputy Medical Superintendent :*

Miss M. W. Warren, M.R.C.S., L.R.C.P.

*Physicians :*

T. S. Nelson, M.A., F.R.C.P.

M. M. Deane, M.D., M.R.C.P., D.P.M.

*Surgeons :*

W. J. Ferguson, M.S., F.R.C.S.

J. Scholefield, F.R.C.S.

*Obstetric Surgeons :*

D. M. Stern, M.A., F.R.C.S., M.R.C.O.G.

Miss I. M. Titcomb, M.A., B.M., B.Ch.

*Pathologists :*

W. Broughton-Alcock, B.A., M.B.

A. C. Counsell, M.B., B.S., D.P.H.

*Assistant Medical Officers :* 14.*House Officers :* 4.*Matron :*

Miss E. Huggins.

## \*CHASE FARM EMERGENCY HOSPITAL.

*Medical Superintendent :*

R. L. Galloway, M.B., ChB., F.R.C.S.

*Deputy Medical Superintendent and Physician :*

C. A. Birch, M.D., M.R.C.P., D.P.H.

*Assistant Medical Officers :* 1.*House Officers :* 7.*Matron :*

Miss E. Sewell.

## \*STAINES EMERGENCY HOSPITAL.

*Medical Superintendent :*

G. Stephen, M.B., Ch.B., F.R.C.S.

*Deputy Medical Superintendent :*

A. B. McLean, M.B., B.S.

*House Officers :* 3.*Matron :*

Mrs. I. Lang.

## EDGBURY CONVALESCENT HOME, WOBURN SANDS.

*Medical Officer (part-time) :*

J. Richardson, M.R.C.S., L.R.C.P.

*Matron :*

Miss M. A. Bishop, R.R.C.

## MIDDLESEX COUNTRY HOSPITAL, HAREFIELD PLACE.

*Medical Officer :*

W. A. Steel, M.D., F.R.C.P.

*Matron :*

Miss C. Woodward.

## MIDDLESEX COUNTY MATERNITY HOSPITAL, BUSHEY HEATH.

*Medical Officer :*

J. N. Deacon, M.C., M.B., B.S.

*Assistant Medical Officers :* 2*Matron :*

Miss E. R. Wheeldon.

## \*COUNTY SANATORIUM AND EMERGENCY HOSPITAL, HAREFIELD.

*Acting Medical Superintendent :*

K. R. Stokes, M.R.C.S., L.R.C.P.

*Acting Deputy Medical Superintendent and Physician :*

L. E. Houghton, M.A., M.D.

*Assistant Medical Officers :* 5*House Officers :* 8*Matron :*

Miss B. A. Shaw.

\* The additional medical staff of these emergency hospitals is provided by the Emergency Medical Service.

\*COUNTY SANATORIUM AND EMERGENCY HOSPITAL, CLARE HALL, SOUTH MIMMS.

*Medical Superintendent :*

F. A. H. Simmonds, M.A., M.D., B.Chir., D.P.H.

*Deputy Medical Superintendent :*

A. G. Hounslow, M.D., B.S.

*Assistant Medical Officers : 3*

*House Officers : 3*

*Matron :*

Miss A. R. Spall.

DANESBURY MANOR CONVALESCENT HOME, WELWYN, HERTS.

*Visiting Physicians :*

L. E. Houghton, M.A., M.D.

B. C. Thompson, M.A., M.D.

*Matron :*

Miss E. M. Watts.

\* The additional medical staff of this emergency hospital is provided by the Emergency Medical Service.

## SUMMARY OF IMPORTANT STATISTICS RELATING TO THE ADMINISTRATIVE COUNTY OF MIDDLESEX.

	1939	1940
Area (including inland water).. .. .	148,691 acres	
Population 1931 (census) .. .. .	1,638,728	
„ 1939 and 1940 .. .. .	$\int$ *2,103,300 $\{$ †2,056,100	‡1,952,100
Number of structurally separate dwellings occupied, 1931 (census) .. .. .	348,595	
Number of private families, 1931 (census) .. .. .	431,368	
Rateable value ... .. .	£21,087,797	£21,574,506
Product of a penny rate, financial year .. .. .	£84,816	£84,085
Live births—	M. F. Total.	M. F. Total.
Legitimate .. .. .	15,729 14,883 30,612	14,610 13,746 28,356
Illegitimate .. .. .	641 618 1,259	593 568 1,161
Birth-rate .. .. .	15.2	15.1
Stillbirths.. .. .	1,051	922
„ Rate per 1,000 total births.. .. .	31.9	30.3
Deaths .. .. .	19,295	23,277
Death-rate .. .. .	9.4	11.9
Number of women dying from diseases and accidents of pregnancy and childbirth :—		
From sepsis .. .. .	22	18
From other causes .. .. .	71	45
Maternal mortality-rate per 1,000 live births .. .. .	2.95	2.18
„ „ „ „ total „ .. .. .	2.86	2.12
Infantile mortality-rate per 1,000 live births :—		
Legitimate .. .. .	41	49
Illegitimate .. .. .	93	87
Total.. .. .	43	50
Deaths from cancer (all ages) .. .. .	3,049	3,175
„ measles (all ages).. .. .	2	19
„ whooping cough (all ages) .. .. .	47	16
„ diarrhoea (under 2 years of age) .. .. .	135	223

\* Estimated resident population, mid-1939.

† Estimated population for calculation of death-rates, 1939.

‡ Estimated population for calendar year, 1940.



# Administrative County of Middlesex.

## ANNUAL REPORT OF THE COUNTY MEDICAL OFFICER FOR THE YEARS 1939 and 1940.

### Natural and Social Conditions.

AREA.—The area of the County of Middlesex, inclusive of inland water, is 148,691 acres.

There are no county boroughs in Middlesex, so that the area of the administrative county coincides with that of the geographical county.

There are 26 separate local government areas in the County as follows :—15 municipal boroughs with an area of 70,196 acres and 11 urban districts with an area of 78,495 acres. There are no rural districts in the County.

POPULATION.—The estimated resident population of the County at the middle of 1939 was 2,103,300, an increase of 45,000 as compared with the previous year. This figure is used for calculating birth-rates only. In so far as the calculation of death-rates and the incidence of notifiable diseases is concerned, an adjusted figure of 2,056,100 was computed by the Registrar-General, in view of the exclusion of non-civilian deaths registered after the outbreak of war.

It will be observed that, in a number of districts the figure given for the calculation of death-rates is higher than that for computing the birth-rates. This is explained by the fact that the inward movements of population after the commencement of hostilities exceeded the deductions on account of non-civilians and enlistments.

As regards 1940, populations are given for the calculation of death-rates or the incidence of notifiable diseases amongst civilians. The Registrar General's estimate of resident population was given as 1,952,100. Estimates of the numbers and distribution of the non-civilian population are not available, and the birth-rate can only be based on the civilian population of 1940 as used for death rates.

The usual table showing the population in each separate area in Middlesex does not appear in this report as it is not considered desirable to publish details of distribution of the population. Considerable movements, however, have taken place, large numbers having left the county under the Government's evacuation scheme or because their place of work had been transferred to some other part of the country. Influxes have also occurred of families bombed out of London and other towns and of people who have moved to Middlesex in connection with new industries.

BIRTHS AND BIRTH-RATES.—The following table gives the birth statistics for the last five years for Middlesex, London, the Great Towns, and England and Wales :—

Year.	The County		London	Great Towns	England and Wales
	Live births	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living
1936 .. .. .	29,110	15·0	13·6	14·9	14·8
1937 .. .. .	30,665	15·2	13·3	14·9	14·9
1938 .. .. .	31,617	15·4	13·4	15·0	15·1
1939 .. .. .	†31,871	15·2	12·3	14·8	15·0
1940 .. .. .	29,517	15·1	13·7	16·0	14·6

† These figures are not applicable to the calculation of infant and maternal mortality rates, in respect of which a secondary assignment of births has been made by the Registrar-General.

DEATHS AND DEATH-RATES (ALL CAUSES).—The comparative figures for Middlesex, London, the Great Towns and England and Wales as a whole are set out in the following table :—

Year	The County		London	Great Towns	England and Wales
	Deaths	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living	Rate per 1,000 living
1936 .. .. .	18,827	9·7	12·5	12·3	12·1
1937 .. .. .	19,781	9·8	12·3	12·5	12·4
1938 .. .. .	18,680	9·1	11·4	11·7	11·6
1939 .. .. .	19,295	9·4	11·9	12·0	12·1
1940 .. .. .	23,277	11·9	17·8	15·8	14·3

In order to eliminate differences of age- and sex-distributions of populations and to enable truer comparisons to be drawn, the Registrar-General's Department has calculated for each county and county district a figure, the "comparability factor," which when multiplied by the "recorded" death-rate provides a "corrected" death-rate in which allowance has been made for differences in constitution of population.

The table on the opposite page gives information as to the death-rate, both before and after correction, in each district in Middlesex.

DEATHS AND DEATH-RATES IN EACH DISTRICT, 1939 AND 1940

Natural and Social Conditions.

Boroughs and Urban Districts	Under 1 year of age		At all ages			Under 1 year of age		At all ages							
	No.	Rate per 1,000 births	Recorded Rate per 1,000 living	Com-parability Factor	Corrected Rate per 1,000 living	No.	Rate per 1,000 births	Recorded Rate per 1,000 living	Com-parability Factor	Corrected Rate per 1,000 living					
Acton ( <i>Borough</i> )	...	...	...	...	...	48	59	10.5	1.08	11.3	44	60	14.5	1.03	14.9
Brentford and Chiswick ( <i>Borough</i> )	...	...	...	...	...	30	42	12.1	1.02	12.3	43	61	16.0	0.98	15.7
Ealing ( <i>Borough</i> )	...	...	...	...	...	115	48	9.5	1.01	9.6	95	43	12.4	1.12	13.9
Edmonton ( <i>Borough</i> )	...	...	...	...	...	61	39	9.0	1.07	9.6	56	40	10.9	1.20	13.1
Enfield	...	...	...	...	...	61	35	9.5	1.02	9.7	67	43	10.6	1.13	12.0
Feltham	...	...	...	...	...	48	61	8.5	1.14	9.7	40	50	8.9	1.40	12.5
Finchley ( <i>Borough</i> )	...	...	...	...	...	35	37	11.1	0.98	10.9	27	38	13.5	0.96	13.0
Friern Barnet	...	...	...	...	...	14	41	8.2	0.98	8.0	14	46	9.3	1.04	9.7
Harrow	...	...	...	...	...	128	39	7.4	1.17	8.7	150	50	9.1	1.23	11.2
Hayes and Harlington	...	...	...	...	...	67	57	7.3	1.36	9.9	91	78	8.4	1.55	13.0
Hendon ( <i>Borough</i> )	...	...	...	...	...	63	34	8.3	1.18	9.8	92	57	10.7	1.16	12.4
Heston and Isleworth ( <i>Borough</i> )	...	...	...	...	...	74	50	8.9	1.05	9.3	77	58	12.3	1.14	14.0
Hornsey ( <i>Borough</i> )	...	...	...	...	...	30	29	11.2	0.91	10.2	46	49	15.2	0.92	14.0
Potters Bar	...	...	...	...	...	9	37	9.1	1.05	9.6	8	33	10.4	1.11	11.5
Ruislip-Northwood	...	...	...	...	...	50	51	8.0	1.10	8.8	40	42	8.6	1.21	10.4
Southall ( <i>Borough</i> )	...	...	...	...	...	47	59	8.7	1.14	9.9	52	73	10.4	1.17	12.2
Southgate ( <i>Borough</i> )	...	...	...	...	...	21	27	10.2	0.98	10.0	23	33	11.6	0.95	11.0
Staines	...	...	...	...	...	24	38	10.2	0.95	9.7	23	35	11.9	1.08	12.9
Sunbury	...	...	...	...	...	21	60	10.4	1.00	10.4	12	34	11.9	1.12	13.3
Tottenham ( <i>Borough</i> )	...	...	...	...	...	66	38	10.3	1.13	11.6	64	41	14.3	1.11	15.9
Twickenham ( <i>Borough</i> )	...	...	...	...	...	37	26	10.5	0.99	10.4	63	46	14.8	1.01	14.9
Uxbridge	...	...	...	...	...	58	69	9.3	1.08	10.0	61	69	11.2	1.17	12.4
Wembley ( <i>Borough</i> )	...	...	...	...	...	71	40	7.3	1.26	9.2	95	58	9.9	1.28	12.7
Willesden ( <i>Borough</i> )	...	...	...	...	...	152	52	10.4	1.09	11.3	121	50	14.1	1.08	15.2
Wood Green ( <i>Borough</i> )	...	...	...	...	...	21	34	11.7	1.01	11.8	23	39	15.9	0.97	15.4
Yiewsley and West Drayton	...	...	...	...	...	11	41	8.0	1.17	9.4	21	69	10.3	1.19	12.3
The County	...	...	...	...	...	1,362	43	9.4	1.07	10.1	1,448	50	11.9	1.12	13.3



Detailed information as to the different diseases which contributed towards the total number of deaths and the age-groups in which these deaths occurred is given in the following tables for the years 1939 and 1940 respectively :—

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE  
COUNTY OF MIDDLESEX, 1939.

Causes of Death (1)	All Ages (2)	0— (3)	1— (4)	2— (5)	5— (6)	15— (7)	25— (8)	35— (9)	45— (10)	55— (11)	65— (12)	75— (13)
1. Typhoid and paratyphoid fevers .. .. .	4	—	—	—	—	1	1	—	2	—	—	—
2. Measles .. .. .	2	—	1	—	1	—	—	—	—	—	—	—
3. Scarlet fever .. .. .	3	—	—	2	1	—	—	—	—	—	—	—
4. Whooping cough .. .. .	47	25	17	5	—	—	—	—	—	—	—	—
5. Diphtheria .. .. .	59	1	1	17	35	3	1	1	—	—	—	—
6. Influenza .. .. .	314	10	3	2	3	9	16	25	43	46	64	93
7. Encephalitis lethargica .. .. .	23	—	—	—	—	1	1	5	3	8	3	2
8. Cerebro-spinal fever .. .. .	22	9	1	2	3	4	1	—	2	—	—	—
9. Tuberculosis of respira- tory system .. .. .	1,012	2	4	5	16	177	265	170	166	132	64	11
10. Other tuberculous diseases	162	10	11	18	24	28	24	18	7	13	4	5
11. Syphilis .. .. .	47	5	—	1	—	—	1	4	8	12	13	3
12. General paralysis of the insane, tabes dorsalis .. .. .	73	—	—	—	—	2	4	8	22	26	10	1
13. Cancer, malignant disease	3,049	2	3	5	4	14	63	202	459	816	880	601
14. Diabetes .. .. .	313	—	—	—	2	2	5	10	21	45	136	92
15. Cerebral hæmorrhage, &c.	870	—	1	—	—	—	5	28	73	164	263	336
16. Heart disease .. .. .	5,264	—	—	1	14	38	74	139	358	815	1,530	2,295
17. Aneurysm .. .. .	97	1	—	—	1	3	3	8	9	36	30	6
18. Other circulatory diseases	1,200	—	—	—	—	1	1	13	53	202	370	560
19. Bronchitis .. .. .	467	21	2	3	3	6	9	17	30	73	106	197
20. Pneumonia (all forms) .. .. .	1,003	213	22	30	7	20	25	55	101	150	163	217
21. Other respiratory diseases	154	4	—	—	5	4	10	11	25	36	25	34
22. Peptic ulcer .. .. .	212	1	—	—	—	4	7	33	34	56	49	28
23. Diarrhœa, &c. .. .. .	193	126	9	2	—	8	8	10	7	10	5	8
24. Appendicitis .. .. .	126	—	1	4	14	17	11	13	11	21	20	14
25. Cirrhosis of liver .. .. .	58	—	—	—	1	—	1	3	10	19	20	4
26. Other diseases of liver, &c.	95	2	2	—	2	—	3	6	15	20	26	19
27. Other digestive diseases..	307	12	2	6	6	9	19	30	35	54	71	63
28. Acute and chronic nephritis .. .. .	401	5	2	—	9	10	22	28	60	59	117	89
29. Puerperal sepsis .. .. .	22	—	—	—	—	3	12	7	—	—	—	—
30. Other puerperal causes ..	71	—	—	—	—	9	38	24	—	—	—	—
31. Congenital debility, pre- mature birth, malforma- tions, &c. .. .. .	813	792	4	3	4	4	2	—	3	1	—	—
32. Senility .. .. .	381	—	—	—	—	—	—	—	—	4	50	327
33. Suicide .. .. .	241	—	—	—	—	12	35	34	57	54	37	12
34. Other violence .. .. .	801	41	16	22	58	66	97	64	68	104	105	160
35. Other defined diseases ..	1,382	79	6	11	57	48	92	97	140	258	287	307
36. Causes ill-defined, or un- known .. .. .	7	1	—	—	1	—	1	—	—	1	1	2
All causes .. .. .	19,295	1,362	108	139	271	503	857	1,063	1,822	3,235	4,449	5,486

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE  
COUNTY OF MIDDLESEX, 1940.

Causes of Death (1)	All Ages (2)	0— (3)	1— (4)	5— (5)	15— (6)	45— (7)	65— (8)
1. Typhoid and paratyphoid fevers ... ..	3	—	—	—	—	3	—
2. Cerebro-spinal fever ... ..	58	7	22	5	10	10	4
3. Scarlet fever ... ..	2	—	1	—	1	—	—
4. Whooping cough ... ..	16	7	8	1	—	—	—
5. Diphtheria ... ..	42	3	16	20	3	—	—
6. Tuberculosis of respiratory system ... ..	1,055	3	4	10	649	327	62
7. Other forms of tuberculosis ... ..	162	7	26	22	72	22	13
8. Syphilitic diseases ... ..	140	2	—	—	12	79	47
9. Influenza ... ..	327	20	11	2	53	89	152
10. Measles ... ..	19	3	11	5	—	—	—
11. Acute polio-myelitis and polio-encephalitis ... ..	3	—	—	1	1	—	1
12. Acute infective encephalitis...	28	—	—	1	9	6	12
13. Cancer of buccal cavity and œsophagus (M), uterus (F)...	320	—	—	—	17	148	155
14. Cancer of stomach and duo- denum ... ..	549	—	—	—	31	229	289
15. Cancer of breast ... ..	417	—	—	—	51	232	134
16. Cancer of all other sites ... ..	1,889	—	11	13	147	793	925
17. Diabetes ... ..	172	1	—	3	19	48	101
18. Intra-cranial vascular lesions	1,804	1	2	—	25	435	1,341
19. Heart disease ... ..	5,356	1	1	7	253	1,252	3,842
20. Other diseases of circulatory system ... ..	636	2	—	—	18	128	488
21. Bronchitis ... ..	1,518	45	12	7	69	397	988
22. Pneumonia ... ..	1,452	228	62	13	147	347	655
23. Other respiratory diseases ... ..	349	5	2	3	52	138	149
24. Ulcer of stomach or duo- denum ... ..	245	—	—	—	41	134	70
25. Diarrhœa under two years ... ..	223	212	11	—	—	—	—
26. Appendicitis ... ..	126	—	10	11	40	41	24
27. Other digestive diseases ... ..	526	13	11	14	83	166	239
28. Nephritis ... ..	474	2	3	5	79	161	224
29. Puerperal and post-abortive sepsis ... ..	18	—	—	—	18	—	—
30. Other maternal causes ... ..	45	—	—	—	45	—	—
31. Premature birth ... ..	359	359	—	—	—	—	—
32. Congenital malformations, birth injury, and infantile diseases ... ..	449	393	12	4	24	12	4
33. Suicide... ..	201	—	—	1	57	98	45
34. Road traffic accidents ... ..	278	1	6	31	106	65	69
35. Other violent causes ... ..	2,248	52	94	154	914	624	410
36. All other causes ... ..	1,768	81	33	41	264	389	960
All causes ... ..	23,277	1,448	369	374	3,310	6,373	11,403

A substantial rise in total deaths and in the death-rate is apparent for the year 1940. This is largely accounted for by the appearance of a new cause of death among the civilian population, namely, "death through enemy action." The figures are merged in the total of "other violent causes" in the table above. The rest of the rise is mainly made up by a considerable increase in the deaths from bronchitis, pneumonia and other respiratory diseases, particularly among elderly people. No doubt the cold and dampness of shelter life, and exposure following damage to dwelling-houses by bombing during the autumn and winter of 1940 are factors responsible for some of this increase.

INFANTILE MORTALITY.—Owing to the large movements of population which occurred after the outbreak of war, a secondary assignment of births has been made by the Registrar-General for the last quarter of 1939. For this period the normal practice of transference of births to the mother's



usual place of residence has not been followed, but, instead, births have been assigned to the area in which a mother may temporarily have been residing as a result of the war. A similar practice has been followed in the assignment of deaths. By calculating infantile and maternal mortality-rates upon these adjusted figures, it was considered that a more accurate picture of the actual morbidity in any area would be obtained. However, for 1940 the Registrar-General reverted to the normal practice of assigning a birth to the district where the mother's usual place of residence was situated.

The following table gives comparative information as to infantile deaths and death-rates in Middlesex, London, the Great Towns, and England and Wales.

Year	The County			London	Great Towns	England and Wales
	Births	Deaths under 1 year	Rate per 1,000 live births	Rate per 1,000 live births	Rate per 1,000 live births	Rate per 1,000 live births
1936 .. .. .	29,110	1,434	49	66	63	59
1937 .. .. .	30,665	1,494	49	60	62	58
1938 .. .. .	31,617	1,433	45	57	57	53
1939 .. .. .	31,871	1,362	43	48	53	50
1940 .. .. .	29,517	1,448	50	50	61	55

The infantile mortality rate for that area of the County in which the County Council is the maternity and child welfare authority was 53·7 per 1,000 live births for 1939 and 54·8 for 1940.

MATERNAL MORTALITY.—During 1939 the deaths were reported of 93 women from causes connected with pregnancy and childbirth, corresponding to a maternal mortality rate of 2·95 maternal deaths per 1,000 live births.

In the following table maternal deaths are shown under the two categories into which they are classified by the Registrar General :—

Year	Puerperal sepsis		Other accidents and diseases of pregnancy and parturition		Total	
	Number of deaths	Rate per 1,000 live births	Number of deaths	Rate per 1,000 live births	Maternal deaths	Maternal mortality rate
1936 .. .. .	26	0·89	42	1·44	68	2·34
1937 .. .. .	29	0·95	56	1·83	85	2·77
1938 .. .. .	26	0·82	51	1·61	77	2·44
1939 .. .. .	22	0·70	71	2·25	93	2·95
1940 .. .. .	18	0·62	45	1·56	63	2·18

It will be observed that, although the gross mortality rate showed a moderate rise in 1939, this increase was confined solely to accidents or diseases of pregnancy, other than puerperal sepsis. It is satisfactory to note that this rise was not repeated in 1940, when the mortality rate for puerperal sepsis again showed a new low record.



### Civil Defence Casualty Services.

More than two years before the outbreak of war the organisation of the casualty services for civil defence had been a subject of consideration, and conferences on the matter had been held between the County Medical Officer and the medical officers of health of the boroughs and districts of Middlesex. At that time, when war seemed a remote contingency, the Home Office as the sole government department responsible for A.R.P. did no more than indicate general lines of preliminary action to be taken, leaving County Councils to prepare a scheme for a complete casualty service, including all hospital beds. In June, 1937, the County Medical Officer reported to the County Council on the preliminary steps to be taken to organise first aid posts, stretcher parties, anti-gas measures, an ambulance service and a great increase in hospital beds on an emergency basis.

The Munich crisis of September, 1938, in a startling fashion brought the idea of war from an academic abstraction to a stark reality. The hasty improvisations attempted at that time to provide a casualty service from the county's existing resources, without any augmentation from outside, brought to light the lack of preparedness. Thereafter progress was comparatively rapid. In the pages which follow is described the evolution of the county organisation of aid posts, cleansing stations, stretcher parties, ambulances, &c. For the effective development of these services a great deal of credit is due to the medical officers of health and A.R.P. medical officers of the boroughs and districts of Middlesex. These officers have borne the brunt of the difficulties involved in the setting up and operating of these new services and without exception they have co-operated with the County Public Health Department and have shown the greatest goodwill and cordiality.

**FIRST AID POST SERVICE.**—In the beginning of 1939 visits were paid to every local authority in the county of Middlesex to arrange for the provision of first aid posts in accordance with the policy of the Ministry of Health.

The main function of these first aid posts was to be the treatment of "walking wounded" and persons suffering from slight injuries who would otherwise converge on the casualty department of hospitals and thereby interfere with the hospital arrangements for the rapid admission and classification of seriously injured stretcher cases. Density of population, vulnerability of area and geographic conditions were factors which received consideration in fixing the number and location of first aid posts.

With the approval of the Ministry of Health, 90 buildings in Middlesex were designated as first aid posts. Selected premises included clinics, village or church halls, sports pavilions, schools, cottage hospitals and the out-patient departments of the larger general hospitals. Structural alterations and works of adaptation were carried out and washing facilities were provided to the standard then required by the Ministry of Health for the cleansing of gas contaminated walking casualties.

Medical and surgical equipment for first aid posts received from the Ministry of Health was distributed to local authorities from stores in the county hospitals.

Volunteers were enrolled, trained in first aid and anti-gas measures and allocated to first aid posts for whole-time or part-time service. A trained nurse was appointed to each post and a medical practitioner was engaged on a retaining fee basis at each post. Advanced training of first aid post staffs was provided by the medical officer in charge of the post and by the allocation of personnel to general hospitals for a 96 hour course of practical training.

In addition to the fixed first aid posts referred to above, the Ministry of Health approved the inclusion of 57 mobile aid posts ("mobile units") in the County Council's civil defence casualty service. Commercial vans and motor coaches were converted and equipped for the purpose of reinforcing static first aid posts if necessary, or proceeding to and treating casualties at the scene of bombing in any area not adequately served by static aid posts.

In addition to the local authorities in Middlesex, the following districts in Hertfordshire are included in Group 6, London Region; Elstree Rural District, Bushey Urban District, East Barnet Urban District, Barnet Urban District, Cheshunt Urban District, and the administration of the casualty services in these districts is carried out by the Middlesex County Council. The total number of aid posts in the Group at the close of 1940 was as follows:—

Static first aid posts ... ..	98
Mobile first aid posts ... ..	64

The total number of paid personnel engaged in aid posts (fixed and mobile) was 402 men and 1,882 women.

As the result of experience gained during air raids in 1940, changes occurred in the policy of the Ministry of Health and a considerable amount of re-organisation was called for in the first aid post service. Shifts of duty were altered to overcome the difficulties and risks of travel in the black-out during raids. Reasonable sleeping facilities were required in first aid posts for personnel, and lateral and overhead protection became necessary to permit the continued function of aid posts during long continued raids.

Considerable improvement became essential in the facilities provided for the cleansing of gas-contaminated casualties as it soon became obvious that the limited provision which had been approved by the Ministry would be totally inadequate for undertaking work as outlined in subsequent Government circulars.



Following representations to the Ministry of Health, information became available on the revised requirements and extensive works were undertaken to provide reasonable gas cleansing units at first aid posts. Solid fuel boilers were installed, hot and cold services provided and showers were fitted in the cleansing room. Supplies of clothing provided through the Ministry were issued to the cleansing units of aid posts, along with other essential equipment.

During the air raids in 1940 the first aid post service was put to the test and, in certain boroughs and districts, which suffered attack on successive nights, it became necessary to appoint an additional trained nurse so as to allow a regular spell off duty for the trained nurse in charge of each post.

Although large numbers of casualties were treated at a number of first aid posts, the service as a whole was not extended in coping with the injured, the number of whom were much fewer than had been anticipated.

**STRETCHER PARTIES.**—The stretcher bearer service was one of the earliest considerations of the new A.R.P. casualty arrangements, and early instructions were issued on the numbers and composition of stretcher parties. Nevertheless, at the outbreak of war, very few men had been enrolled as stretcher bearers, and of those enrolled a smaller number had been trained. During the first days of war large numbers of men came forward, and training was carried out intensively by the local authorities. Large numbers of volunteers offered to enrol in a part-time capacity, and these also were trained, so that within a short time after the outbreak of war a service was available for duty. As time passed, however, and the expected air raids did not materialise, men resigned and found other employment. Even before bombing started, it was realised that the original establishment of stretcher parties which had first been suggested was excessive, and the number of paid personnel which authorities were allowed to employ was reduced to 50, 60 or 70 per cent. of these numbers. The more highly populated and vulnerable areas were reduced less than those which are rural and comparatively thinly populated. Few of the districts had been able to attain the original establishment, and the new numbers in the main represented the actual strength which it had been possible to recruit.

Until July, 1940, when the Civil Defence (Employment) Order was made, men continued to drift from the casualty services to more remunerative employment. This Order prevented the further withdrawal of personnel from the stretcher party service. In the same month, members of stretcher parties were reserved under the Schedule of Reserved Occupations at the age of 30. Since that time there has been some stability, though the numbers have continued to fall by reason of calling up of the younger men for service with the armed forces.

Stretcher parties are housed in depots which are situated strategically throughout the area of Group 6. In Middlesex, speaking generally, they share depots with the ambulance service, though there are some depots which house the rescue service in addition. Stretcher party personnel are on duty for 24 hours, then off duty for 24 hours. Blast and splinter proof shelters are provided, in which 90 per cent. of a shift on duty may sleep and the remaining 10 per cent. stand by ready for action. Only four depots have been damaged by enemy action, and in no case were there large numbers of casualties among the personnel.

The technical training of stretcher parties has been carried out initially by medical practitioners, and is continued by lay instructors. All personnel are required to pass the examination of the St. John Ambulance Brigade or the British Red Cross Society, or an examination of equivalent standard. Training, which is continuous, has resulted in a standard being reached which is higher than that ordinarily set by these uniformed societies. The type of first aid required during war time, when large numbers of casualties may require to be dealt with, under fire and in darkness, is more practical and less academic than that taught under peace time conditions. The stretcher bearer must be so trained in the principles of his subject that during a night of raiding he will carry out as quickly as possible the minimum of first aid procedure compatible with safety.

The supply of uniforms of the battle-dress type and the establishment of grades of pay have done much to imbue the service with that discipline which any body of men must have to be efficient.

The stretcher parties have at no time been as extended as the rescue parties; rarely has any one district had all its parties in action at the same time. In some of the outer districts the stretcher bearers have seen little action, but in the more populous parts many parties have obtained much experience. The work which they have been able to carry out has been uniformly good, and two stretcher bearers, one in Tottenham and the other in Heston and Isleworth, have had their gallantry recognised by the award of a George Medal. It may be mentioned here that among other recipients of the George Medal was Dr. Manson, the medical officer of health of Wood Green, who rendered invaluable aid at great personal risk when a tube station was damaged by enemy action.

The earliest forecasts of the number of casualties which might occur as a result of bombing were greatly in excess of the numbers which were actually experienced. The large numbers of seriously injured persons with which it was expected the stretcher parties would have to deal have so far not occurred in Middlesex.

**AMBULANCE SERVICE.**—In pursuance of instructions contained in Ministry of Health circular 1764, dated 10th January, 1939, an Ambulance Officer—Mr. C. H. Oliver, Barrister at Law—was appointed on the staff of the County Medical Officer, and commenced duties in March, 1939. A scheme for an Emergency Ambulance Service for the County was prepared, and submitted by the County Medical Officer to the A.R.P. Committee on 11th July, 1939. Under the scheme, certain



civilian commercial vehicles were requisitioned at the outset of war and converted for use as ambulances, the establishment at that time being 1,113 ambulances and 737 motor cars for sitting wounded cases.

Owing to the unsuitability of requisitioned or loaned vehicles and the high cost of compensation, the Government in October, 1939, sanctioned the purchase of motor cars and arrangements for their adaptation to ambulances. The County Council forthwith began to buy high powered cars in a very favourable market, with the result that a fleet of workmanlike emergency ambulances was quickly assembled at an average price of less than £50 per vehicle complete. Whilst this was proceeding, the Regional Commissioners, in January, 1940, in the light of experience gained, decided that the establishment number of vehicles and personnel was excessive. Accordingly, the establishment for the County was reduced to 557 ambulances and 382 cars for sitting cases. These vehicles were purchased and distributed between 100 ambulance stations.

The 100 ambulance stations or depots are in nearly every case jointly occupied by stretcher-bearer parties. They are mostly sited in schools or public halls; in a few instances, empty private houses have been requisitioned. In all cases adequately protected sleeping accommodation has been provided for the personnel on duty.

With regard to the work carried out by the ambulance service, the provision made proved adequate for the conveyance to hospitals and aid posts of the casualties which occurred at the peak of the bombing period. In addition to the normal routine work of dealing with air raid casualties the ambulance service has been called upon to assist in the inter-hospital transfer work. This is a scheme whereby patients are moved outwards in each hospital sector, so as to provide the maximum number of casualty beds in inner London. For this work there are a number of Green Line coach ambulances allotted to the County area, augmented by the existing County emergency ambulance service. Under the scheme 2,950 cases were transported, necessitating 266 journeys by ambulance coaches, 158 by emergency ambulance service vehicles, 90 by civil ambulances and 19 by L.P.T.B. buses.

During October and November, 1940, it was decided to carry out long distance evacuation by train of certain senile and chronic cases from hospitals and institutions in London. Under this scheme the County Ambulance Officer and his two assistants supervised the entraining of 1,899 stretcher cases and 2,341 walking cases, totalling 4,140 persons in 17 trains.

In addition to the above, at the end of 1939 and early in 1940, a number of trains, containing service casualties, were detrained within or near the boundary of the County and conveyed by ambulance to various hospitals both within and outside the County.

As time went on, owing to the national demand for man power, every endeavour had to be made to replace men by women, and this necessitated the training of ambulance attendants as drivers, with very satisfactory results.

Damage by enemy action to depots was not severe, four only receiving serious damage. In none of these incidents were any personnel injured. In addition to these major cases of damage, several depots received minor damage from blast or shrapnel. There has been no serious loss of vehicles, though several were damaged beyond repair by blast or falling masonry.

The ambulance service in Group 6 has operated smoothly and well, and on many occasions has been paid a compliment by London Region in being asked to undertake duties in other groups and regions.

**SICK BAYS.**—During the night raiding period in the winter of 1940, it was found necessary to make special provision for certain classes of persons suffering from exhaustion or shock, who needed a period of rest in comfort, with a minor degree of nursing, but were not sufficiently ill to require a hospital bed. There were established, therefore, "sick bays" for such persons, as an extension of the rest centre system.

The first sick bays to be established in Middlesex were organised on a voluntary basis by the British Red Cross Society. Gradually, the borough and district councils and the County Council have come into this organisation and the respective responsibilities of the County Council, the rehousing and public health departments of the borough and district councils and the British Red Cross Society have been laid down by the Regional Commissioners. The types of case which sick bays should accommodate are:—

(a) *For short periods.*

(i) *From rest centres.*—Shocked and distressed persons needing rest and recuperation for periods up to three weeks; cases of minor illness which would normally be nursed at home.

(ii) *From existing billets.*—Persons suffering from minor illness that would be nursed at home but for whom the necessary attention or nursing cannot reasonably be provided in billets and whose condition does not justify the use of a hospital bed.

(b) *For longer periods.*—Old and infirm, lame, blind, &c., for whom no other accommodation is suitable.

Fourteen such sick bays have been established in Middlesex, providing, in all, accommodation for about 350 persons. They have already proved most useful.



HEALTH AND MEDICAL SERVICES IN PUBLIC SHELTERS.—In September, 1940, a joint committee was appointed by the Ministry of Health and the Ministry of Home Security, under the chairmanship of Lord Horder, to enquire into shelter conditions, with special reference to health.

The recommendations of this Committee fell under two heads: those dealing with hygiene in shelters and those aiming at providing medical supervision and first aid facilities. Hygienic measures included attention to ventilation, water supply, provision of bunks, &c. These matters are essentially the functions of the medical officers of health of the boroughs and districts within the County. Arrangements for the provision of medical and nursing attention in the larger shelters are also being administered by the local medical officers of health on behalf of the County Council.

A number of circulars have been issued by the Ministries concerned, aiming at improving the general hygienic and sanitary conditions in shelters. Most of the usable shelters have been provided with bunks. All large shelters have lighting, bright enough for reading, which can be dimmed at night, and have a satisfactory water supply. In many shelters ventilation remained unsatisfactory, but the situation was eased somewhat by the revised attitude to gas-proofing. It is difficult to see how it can ever be made really satisfactory without recourse to mechanical ventilation which is now only approved in exceptional circumstances.

The provision of amenities in smaller shelters has naturally lagged behind that approved in the larger ones, and the allotment of expenditure on smaller shelters has tended to be spent more on strengthening and waterproofing. All public shelters are cleansed adequately, and the sanitary conveniences for shelters have been greatly improved since the policy of removing closets outside the shelter was adopted.

Ministry of Health Circular 2190, of 30th October, 1940, required that rather special medical and nursing facilities be made available for shelter users. The services of a general medical practitioner must be readily available during the night for attendance in shelters on any cases of illness or accident. This has been made possible throughout the County by the medical officer of health of each district having a rota of doctors on call, who attend when requested.

More elaborate arrangements have been set up in large shelters; that is, those accommodating, on an average, 500 persons per night, or groups of shelters in close proximity to one another accommodating such a number. In these cases the Ministry laid down that a "medical aid post" should be established, consisting of an apartment with equipment for dealing with minor ailments and accidents, screened off from the main part of the shelter and provided with a few bunks for the segregation of sick persons. These medical aid posts were visited nightly by a doctor and are attended by a trained nurse throughout the hours the shelter is used. In all 22 medical aid posts have been established in public shelters in Middlesex.



## General Hospitals.

The transition from peace to war conditions has brought about more profound changes in the Council's hospitals than in any other of its health services. The developments which have occurred, the changes which have been made, and the results which have ensued are most conveniently considered under separate headings :—

### ADMINISTRATION—THE SECTOR SCHEME.

In order to deal with the hospital treatment of casualties which were to be expected as the result of aerial attack, the Government, some considerable time before the war, evolved the "Sector Scheme." The conception of this scheme was that the area of Greater London and parts of the surrounding counties was divided into 10 sectors, radiating outwards from central London like the spokes of a wheel. Casualties admitted to the central hospitals of any sector were to be evacuated by ambulance centrifugally at the earliest moment they were fit to travel, along the lines of the sector to peripheral hospitals, thus keeping the central hospitals as clear as possible for the reception of more casualties. It was also considered wise to distribute much of the skilled staff and expensive equipment of the central hospitals in order to minimise loss in the event of heavy raiding upon central London. At the apex of each sector was a teaching hospital, and an eminent physician or surgeon of the staff of this hospital was appointed to be "Group Officer" for his sector, and was endowed with certain powers of control over movements of medical staff and of patients between hospitals within the sector. Associated with each group officer was a matron—the "Sector Matron"—responsible for the adequacy of the nursing staff in each hospital of the sector; and a lay officer—the "lay Sector Officer"—whose duties were concerned with technical and manual staff and with movements of furniture and equipment. As administration of municipal hospitals is so fundamentally different from that of voluntary hospitals, municipal representatives—medical, nursing and lay—were later appointed and attached to each sector headquarters to advise on municipal matters, and to act as a liaison between the group officer and the municipal hospitals.

Whilst each sector was intended to be a self-contained entity, this principle was not too rigidly applied. In times of emergency cross-sector transfers could, and did, take place; moreover, at certain hospitals specialised units serving several sectors were established for the treatment of particular types of injury. As examples may be instanced a unit for injuries of the thorax, at Harefield Hospital, and a unit for brain and spinal cord injuries at Chase Farm Hospital. As a further example of elasticity within each sector, it may be mentioned that arrangements were made whereby a few members of the staff of certain hospitals were enrolled to form mobile teams, which at short notice could be sent to reinforce some other hospital which found itself with insufficient surgical staff to cope with its casualties.

Certain features of the sector scheme, such as the arrangements for the evacuation of casualties and distribution of staff and equipment, are eminently practical and have proved their value. As an administrative instrument, however, the scheme is basically unsound, introducing, as it does, duality of control and cutting across at a stroke the highly efficient hospital organisations which counties such as Middlesex had slowly evolved in the light of experience extending over many years.

No less than six of the ten sectors pass through Middlesex: the complications of the system as applied to this county, therefore, can readily be imagined. It is by reason of the goodwill on the part of the group officers, and the good relations established between them and the Public Health Department of the County Council, that the scheme has been made to work in spite of its manifest imperfections.

### HOSPITAL ACCOMMODATION.

The war affected the problem of hospital accommodation in Middlesex in two principal and opposite directions. It brought suddenly to an end the several schemes of hospital expansion on which the County Council and its officers had worked for many years, and which had almost come to fruition. On the other hand, the Government, in pursuance of its Emergency Hospital Scheme, considerably expanded a number of the County Council's establishments by the erection of blocks of temporary construction. These two aspects of the matter need separate consideration.

In September, 1939, the County Council had in an advanced stage of preparation three major schemes of hospital expansion. For all of these, detailed plans and working drawings had been prepared, the necessary authorisations obtained, and specifications had gone out, or were about to go out, to tender. These three schemes, which the outbreak of war brought to a sudden standstill, were :—

(a) The rebuilding of the North Middlesex County Hospital by the erection of a large multi-storied vertically-planned hospital, containing complete in-patient and out-patient services. The demolition of Edmonton House, and the preparation of the site for the new building were well in hand when work ceased.

(b) Completion of the development of Hillingdon County Hospital by the erection of administrative offices, out-patient and special departments, theatres, ward blocks of some 400 acute beds, maternity unit of 80 beds, and a block of about 300 beds for chronic cases.

(c) Completion of the West Middlesex County Hospital by the building of an out-patient department, maternity wing, special departments, a surgical unit and an extension to the nurses' home.



The need for these works is no less great than at the date when their progress was deferred, and, so far as it is possible to foresee the future at the time of writing, it would seem that the whole of these three schemes (with the omission of the chronic block at Hillingdon, which might well be replaced by the utilisation of the Government's hutted wards, presently to be described) should be put in hand at the earliest moment that building becomes possible after the war.

In the early months of 1939 several valuable additions to the County hospital service were completed and came into use. These included :—

*Central Middlesex County Hospital.*—(1) A maternity department of 60 beds. This the County Council decided should be named "The John Tate Maternity Department" in commemoration of the great services rendered to the health services of Middlesex by the late County Medical Officer. A tablet to his memory is to be placed in the vestibule of the building; (2) an out-patient block, with special departments and pathological laboratories; (3) an extension of the nurses' home; (4) completion of the modernisation of the front (acute) wards of the hospital.

*Redhill County Hospital.*—Addition of a third storey to two blocks of the original building, providing a further 83 beds. Advantage was taken of the work of reconstruction to set up a theatre for ear, nose and throat operations, and also to establish a plaster room and unit for the surgical treatment of trauma.

In the summer of 1939 tenders were obtained for the building of a new twin theatre unit, with an attached two-storey ward block of 32 beds for post-operative cases. This building would have practically completed the development of Redhill County Hospital, but owing to the war the work was not started.

*Hillingdon County Hospital.*—To provide some immediate relief for the pressing needs of the rapidly growing area served by this hospital, the County Council agreed to the erection in temporary construction of an out-patient department providing facilities for special clinics. This was completed and in operation at the outbreak of war. As the need for additional beds could not wait upon the planned permanent extensions of the hospital, the County Council decided to erect rapidly in temporary construction a four-winged block providing 150 additional beds. The work was a good deal short of completion at the outbreak of war, but in view of its urgency it was allowed to proceed. Much delay occurred owing to difficulty with labour and materials, but the block was eventually finished and came into use in 1940.

*West Middlesex County Hospital.*—Work proceeded with the modernisation of certain of the ward blocks comprising what was formerly known as Warkworth House, now an extension to the hospital and known as the "South Side." The work consisted in the installation of a new heating system, lifts, bed-head lighting, wireless, and improved sanitary services. As result of these improvements, the old infirmary wards, although somewhat narrow as judged by modern standards, have become very serviceable hospital wards and are largely occupied by acute medical cases; surgical cases being concentrated in the wards of the original hospital or "North Side" in proximity to the theatres. To house the inmates during the time the reconstruction work was in progress, a four-winged block of 144 beds was erected in temporary construction and this formed a useful addition of beds when war came.

The Government's plan of emergency hospital provision led to the creation of four new general hospitals at County Council establishments, namely, at Staines Institution, Harefield Sanatorium, Clare Hall Sanatorium, South Mimms and Chase Farm Institution, Enfield. A very considerable expansion was also made at Hillingdon County Hospital.

*Chase Farm Institution* before the war was a home for old people. It consists of a number of large brick buildings, which quite recently before the war had been reconditioned and adapted. Bed lifts had been installed in the main blocks and, in addition, two new blocks of modern design were built. In December, 1938, the buildings had been formally opened as a home for some 600 old people by the Right Honourable Walter Elliott, at that time the Minister of Health. When the Ministry decided to use the institution as an emergency hospital, various alterations were put in hand. Two pairs of twin theatres, with sterilising and anaesthetic rooms, were extemporised, pathological and X-ray departments were set up in parts of the existing buildings, and the dormitories were adapted to serve as very satisfactory wards by the installation of some additional sanitary fittings and the construction of ward kitchens and duty rooms. Within a very short time of the outbreak of war the institution had been transformed into an admirable emergency general hospital of 800 beds with reasonably complete services and departments.

The new hospital construction work undertaken by the Government at Staines, Harefield, Clare Hall and Hillingdon all conformed to the same general plan. It consisted of a pavilion type of layout, the various buildings of semi-permanent construction, opening off a central covered, but open-sided, corridor. At each site were erected a number of ward blocks, and a combined theatre and X-ray unit. Each ward block consists of a single large ward, designed to take 36 beds, bath and sluice rooms, duty room and ward kitchen. Where necessary, kitchens, stores, administrative offices and laboratories were also erected by the Government.

The work was started in the summer of 1939, and the first of the new buildings were ready for occupation early in 1940. This was the first instalment of the Ministry of Health's scheme of



emergency hospital construction, and it provided at County Council hospitals in Middlesex the following number of additional beds :—

							Beds.
Chase Farm Hospital	...	...	...	...	...	...	800
Staines County Hospital	...	...	...	...	...	...	400
Harefield County Sanatorium	...	...	...	...	...	...	400
Hillingdon County Hospital	...	...	...	...	...	...	300
Clare Hall County Sanatorium	...	...	...	...	...	...	300
Total...							2,200

Before the erection of this first instalment was complete, the Ministry of Health again sought the co-operation of the County Council—which was readily forthcoming—with a view to adding yet a further 1,100 beds to those already under the Council's administration, viz., 400 each at Staines and Harefield, 100 at Hillingdon and 200 at Clare Hall. Owing to difficulties with material and labour, progress with these further extensions was not rapid, but by the end of 1940 the work was well in hand.

*Equipment and Stores.*—Practically all the additional furniture and equipment needed for the emergency hospital extensions were provided by the Government. Some months before the outbreak of war, large stocks of fuel, drugs, dressings and non-perishable foods were laid in at each hospital, so that in the event of great dislocation of industry or transport the essential hospital services of the County Council could continue to function for many weeks on their own reserves.

*Staffing.*—Early in 1939 the Council decided that at any new hospitals, which the Government might set up in County Council establishments, the administration of which would fall to the County Council to carry out, the key positions, namely, those of medical superintendent, matron and steward, must be held by officers of the County Council. At Harefield and Clare Hall the position was already met as the senior officers of the sanatorium would naturally assume control of any general hospital wings which might be established there. At Chase Farm and Staines, however, which had not previously functioned as hospitals, appointments had to be made. Accordingly, it was agreed that at Chase Farm, in the event of war, Mr. R. L. Galloway, F.R.C.S., Senior Surgeon to the North Middlesex County Hospital, should become medical superintendent, whilst the offices of matron and steward should be filled by Miss E. Sewell and Mr. Guy, the matron and superintendent of Chase Farm Institution. Later, Dr. C. A. Birch, M.D., M.R.C.P., Senior Physician to North Middlesex County Hospital, was seconded to become deputy medical superintendent at Chase Farm Hospital. At Staines County Hospital, Mr. G. Stephen, F.R.C.S., Surgeon to West Middlesex County Hospital, was nominated as medical superintendent, Mrs. I. Lang, Deputy Matron of the same hospital, as matron, whilst Mr. G. Priestley, Deputy Master of Percy House Institution, was to be steward. A week or two before the outbreak of war these officers took up their new positions and were ready to receive the influx of staff and equipment which arrived. In 1940 Dr. A. B. McLean was transferred from the staff of West Middlesex County Hospital to become deputy medical superintendent of Staines County Hospital.

*Medical Staff.*—The additional medical staff required for the great increase of beds in County Council establishments was derived from the Emergency Medical Service. Physicians, surgeons, anaesthetists, radiologists, and other specialists—mostly from the staffs of voluntary hospitals in the London area, the bed complements of which had been reduced—were allocated to the County hospitals by the Group Officers.

The following important appointments to the County Council's own medical staff were made during the period under review :—

North Middlesex County Hospital.—Physician : R. Kempthorne, M.A., B.M., B.Ch., M.R.C.P.  
Obstetric Surgeon : A. W. Purdie, M.B., Ch.B., F.R.C.P. & S., M.R.C.O.G.

Redhill County Hospital.—Physician : L. T. M. Castleden, M.D., M.R.C.P.

Central Middlesex County Hospital.—Medical Superintendent : H. Joules, M.D., M.R.C.P. (December, 1939, in succession to H. Carter, F.R.C.S., M.R.C.O.G.). Senior Physician : F. Avery Jones, M.D., M.R.C.P. (in succession to Dr. Joules). Physicians : A. Barham Carter, M.D., M.R.C.P., D.P.M., and J. Sakula, M.D., M.R.C.P., D.C.H., Senior Obstetrician : J. S. MacVine, F.R.C.S., M.R.C.O.G. Pathologist : W. Pagel, M.D.

West Middlesex County Hospital.—Surgeon : J. Scholefield, F.R.C.S.

*Nursing Staff.*—One of the most difficult problems which the Council has had to face has been the provision of nurses to staff its new beds. Within quite a short period of time over 2,000 additional beds came into existence, and, even on the Ministry of Health's emergency standard of 35 nurses per 100 beds, this number called for over 700 nurses to staff them. Plans were made in the early summer of 1939 to distribute the Council's entire resources of hospital nurses throughout all the hospitals, new and old. This provided for a basic nursing staff of the Council's own officers in the ratio of one nurse to four beds throughout. The individual sisters, staff nurses, assistant nurses and probationers were nominated and instructed in their new duties ; details of transport were arranged well in advance, and a few days before the outbreak of war the actual transfer was made ; so that on 3rd September, 1939, the Council's emergency hospitals had sufficient nursing staff to enable them to



function. A small number of nurses in addition were furnished by certain of the sector matrons from voluntary hospitals in the London area. Meanwhile, for many months previously, efforts had been made to make good deficiencies by enrolment of members of the Civil Nursing Reserve.

The Civil Nursing Reserve was organised by the Government in April, 1939, and set out to enrol three classes of member: trained nurses, assistant nurses and nursing auxiliaries. The first two classes of women with nursing training or experience were for the most part comprised of those who had retired from active nursing, but were willing to return to their profession in time of emergency. The third class of nursing auxiliaries were women without previous nursing training, for whom a course of elementary instruction was prescribed in first aid and home nursing, followed by 96 hours' practical hospital experience. The entire organisation of the Reserve for Middlesex was placed in the hands of the County Council, who, with the co-operation of the British Red Cross Society, the Order of St. John, Women's Voluntary Services, and the matrons of the County and of the voluntary hospitals in Middlesex undertook the elementary training of many hundreds of women and girls, who were later enrolled as nursing auxiliaries and allocated to municipal and voluntary hospitals and to first-aid posts in the County.

In view of the ever-increasing demand for hospital nurses, and particularly having in mind the second stage expansion of the Ministry of Health's emergency hospital scheme which was then foreshadowed, the County Council, at the end of 1939, decided as an emergency measure to reduce to seventeen the age for admission of girls for training as probationer nurses in the Council's hospitals. The response was immediate and very satisfactory as, by this reduction of the age of entry, many girls, fresh from school, have taken up nursing who otherwise would have been lost to the profession. The general consensus of opinion of the matrons of the Council's hospitals is that most of the girls of 17 now entering are as suitable for training and as trustworthy as were girls of 18 and over a few years ago. Moreover, not having suffered a serious educational break since leaving school, they tend to be more easily taught. Girls of 17, however, cannot be expected so soon to be able to accept positions of responsibility, and their work on entry to the wards needs to be graduated to their age.

#### MEDICAL EDUCATION.

The Government's Emergency Hospital Scheme brought about a great reduction in bed capacity of many of the hospitals of London, with the result that the teaching hospitals no longer had the clinical material or the teaching staff fully to maintain the medical schools in London. Medical students, therefore, were transferred to peripheral hospitals, and for the first time the municipal hospitals of the Middlesex County Council began to function as teaching hospitals. The County Council welcomed the opportunity of extending hospitality to medical students, and of taking a part in the national scheme of medical education. Among the senior staff of the Council's hospitals are a number of excellent and experienced teachers, and in the wards, departments and laboratories there exists a wealth of clinical material almost unparalleled in this country.

Students from the London Hospital were received at Chase Farm and the North Middlesex County Hospital; from Middlesex Hospital at the Central Middlesex County Hospital; from St. Mary's Hospital at Harefield and Hillingdon County Hospital; from St. George's Hospital and the West London Hospital at West Middlesex County Hospital; and from Charing Cross Hospital at Redhill County Hospital (midwifery). By the end of 1940 between 150 and 200 medical students were receiving part of their medical education in the Council's hospitals. Schemes of systematised instruction had been drawn up between the deans of the teaching schools and the County hospitals concerned, the actual teaching in some cases being conducted by the students own professors, who had come out with them, and in other cases by the Council's staff, according to circumstances.

There can be no doubt that the opportunity thus afforded to medical students of seeing from within something of the organisation of a municipal hospital, as well as of the voluntary hospital which is their parent medical school, cannot but be of value, not only to their medical but also to their social education. The potentialities of the best municipal hospitals as teaching hospitals must not be lost sight of in the post-war re-organisation of the hospital services.

#### DAMAGE TO HOSPITALS BY ENEMY ACTION.

In the course of the aerial bombardment of the metropolitan area, which took place during the autumn and winter of 1940, a number of the Council's hospitals suffered damage, much of it of a major character. The results may be briefly summarised as follows:—

*Hillingdon County Hospital.*—A heavy H.E. bomb scored a direct hit on the short two-storied corridor connecting "A" and "B" blocks. "A" block, consisting of the maternity department and a male surgical ward—85 beds in all—was completely destroyed; "B" block was damaged and had to be strutted, and the main theatre and one X-ray room were out of action for a time.

*West Middlesex County Hospital.*—A heavy H.E. bomb fell just outside the Queen Mary Maternity Wing, wrecking about half the building beyond possibility of repair, short of reconstruction. In the same raid Toolands House, a large building which had latterly been used as a nurses' training school and sleeping quarters, was destroyed, as were a number of other smaller buildings, including the ante-natal clinic and almoner's offices.

*Staines County Hospital.*—This hospital was attacked on a number of occasions. Two hutted wards were partially destroyed, the steward's store was completely demolished, and one of the nurses homes damaged by blast beyond repair.



*North Middlesex County Hospital.*—The steward's store was partially destroyed by incendiary bombs, and a receiving ward was damaged by blast and temporarily put out of action.

*Central Middlesex County Hospital.*—This hospital is situated in an industrial area which almost nightly, for many weeks, suffered from enemy bombing. The hospital itself was bombed many times, and very extensive damage was caused. Several ward blocks were put out of action, as was the ambulance station and part of the nurses' home. The maids' home was completely wrecked by a direct hit. Ultimately, failure of the gas and water supply made it necessary to close the hospital for a time, except for a few casualty beds, which were maintained.

In spite of the great amount of material damage wrought at the County Council's hospitals, the casualties were providentially, and almost miraculously, few. No one was killed or sustained injuries which subsequently proved fatal. In one raid on the West Middlesex County Hospital, 10 patients were injured seriously, and 22 patients and 5 nurses slightly. In all the other numerous attacks, the total of casualties amounted to minor injuries to 8 patients and 4 nurses.

A word of praise is due to the staff. Throughout the difficult and dangerous period all members—doctors, nurses, students and manual workers—acted with courage, coolness and devotion to duty.

*Work of the General Hospitals.*—Throughout the two years under review the Council's hospitals have carried on their primary function of tending the civilian sick. At the outbreak of war, when mass air raids on London were expected and preparations for large numbers of casualties had to be made, all patients who could possibly be cared for in their homes were discharged from hospital in accordance with a Government instruction. Thereafter, a somewhat stringent selection had to be made of cases for admission in order to keep available at all times, and at all hospitals, a number of casualty beds. For this reason many less seriously ill and non-urgent cases could not be admitted, and the turnover of cases is smaller, therefore, for 1939 and 1940 than for the immediately preceding years.

At the time of the withdrawal from Dunkirk in June, 1940, certain of the Council's hospitals received convoys of wounded officers and men. In this connection one hospital was honoured by a visit from Her Majesty the Queen.

During the autumn and winter of 1940 many hundreds of air raid victims were admitted for treatment to the Council's hospitals. Moreover, throughout the year large numbers of sick and wounded persons from London hospitals were evacuated by ambulance to Middlesex hospitals, in accordance with the Government's sector scheme. The social problems connected with these unfortunate individuals, many of whom had been rendered homeless, severely taxed the almoners' departments. Almoners were appointed to all the new hospitals, and the almoners' staffs at most of the other hospitals were strengthened.

By reason of shortage of clerical staff at the hospitals and for reasons of economy, the detailed tables setting out in statistical form particulars of the work of the County hospitals do not appear in this report, with the exception of the following, which deals with the work of the Council's maternity departments.

## GENERAL HOSPITALS.

STATISTICS RELATING TO IN-PATIENTS DEALT WITH IN THE MATERNITY DEPARTMENTS OF THE COUNTY HOSPITALS DURING THE YEARS ENDED 31ST DECEMBER, 1939 AND 1940.

*General Hospitals.*

	North Middlesex County Hospital		Redhill County Hospital		Middlesex County Maternity Hospital, Bushey		Central Middlesex County Hospital		Hillingdon County Hospital		West Middlesex County Hospital		Staines County Hospital	
	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940
1. Number of beds as on 31st December ... ..	48	80	60	60	50	46	85	*38	28	36	88	*29	6	6
2. Number of cases admitted during the year ... ..	1,698	1,121	1,224	1,779	1,012	933	1,211	1,076	808	900	2,102	1,829	120	135
3. Average duration of stay (in days)...	15	19	14	13	14	17	11	11	12	11	14	14	13	13
4. Number of women delivered by— (a) Midwives ... ..	1,450	906	1,017	997	721	620	709	735	634	785	1,547	1,348	116	134
(b) Doctors ... ..	188	179	205	281	53	87	80	118	174	118	377	251	4	1
5. Number of cases in which medical assistance was sought by a mid-wife ... ..	458	558	768	889	527	302	89	125	321	359	813	613	19	39
6. Number of cases notified as puer-peral pyrexia ... ..	83	67	24	33	12	18	22	11	28	20	50	27	1	2
7. Number of cases of pemphigus neonatorum ... ..	—	3	—	—	—	—	—	10	2	—	1	—	—	2
8. Number of infants not entirely breast-fed while in hospital ...	63	94	211	128	72	106	58	121	120	130	308	177	1	8
9. Number of cases notified as ophthalmia neonatorum ...	16	3	1	2	1	2	1	—	1	—	1	2	—	—
10. Number of maternal deaths ...	13	12	4	2	3	2	8	2	6	5	8	6	—	—
11. Number of still-births ...	114	88	53	73	12	11	27	36	41	53	83	74	1	4
12. Number of neo-natal deaths ...	68	47	27	44	14	4	22	19	34	30	52	39	3	1

\* Reduced number of beds caused by enemy action.



# Maternity and Child Welfare.

## ADMINISTRATION OF MIDWIVES ACTS, 1902-1936.

AREA.—Throughout 1939 and 1940 the County Council was the Local Supervising Authority for the whole of the county, with the exception of the Boroughs of Ealing, Edmonton, Hendon, Heston and Isleworth, Tottenham, Twickenham and Willesden, and the urban districts of Enfield and Harrow.

DOMICILIARY SERVICE OF MIDWIVES.—The area for which the County Council is the local supervising authority was designated as a neutral area, with the exception of the Boroughs of Acton and Hornsey. In the neutral area no change was made in the midwifery service, with the exception that temporary additional help was provided in some of the outlying areas of the county, to which unofficial evacuees went. Additional help was also provided in other areas, on account of the closing of maternity hospitals, and maternity departments of general hospitals in London which obliged Middlesex mothers who had arranged to be delivered in these hospitals to have their confinements at home. This help was given by detailing some members of the Council's health visiting staff to maternity nursing, and by temporary transfer of staff.

In the evacuation areas arrangements were made by the district councils for the evacuation of expectant mothers. One of the midwives employed by a welfare council on behalf of the county council accompanied the mothers and remained in the reception area to attend their confinements, but, owing to the rapid return of the mothers to their own homes, was able to take up her work in her own district again before the end of 1939.

The following table sets out particulars of the number of whole-time salaried midwives engaged in the various parts of the Council's area, whether employed by the County Council or by local welfare councils on their behalf, or by voluntary associations subsidised by the County Council, together with information as to the number of confinements attended in the capacity of either midwife or maternity nurse.

Borough or District	Midwives Employed by	Number of whole-time salaried Midwives, 1939 & 1940	Confinements Attended	
			1939	1940
Acton .. .. .	} Queen Charlotte's Hospital ..	6	421	544
Brentford and Chiswick ..				
Feltham .. .. .	County Council .. .. .	6	404	482
Finchley .. .. .	Borough Council .. .. .	3	211	240
Friern Barnet .. ..	County Council .. .. .	2	124	123
Hayes and Harlington ..	" .. .. .	7	540	543
Hornsey .. .. .	Borough Council .. .. .	3	267	358
Potters Bar .. .. .	South Mimms, Potters Bar, and Bentley Heath Nursing Association	2	117	132
Ruislip-Northwood .. ..	County Council .. .. .	3	185	218
Southall .. .. .	Borough Council .. .. .	5	279	325
Southgate .. .. .	Southgate Queen's Nursing Association	2	191	240
Staines—				
Ashford (part of) .. ..	Ashford District Nursing Association	2	123	143
" .. .. .	County Council .. .. .	1	69	84
Laleham and Staines ..	Staines and Laleham Nurse Society ..	2	119	102
Stanwell .. .. .	Stanwell District Nursing Association	2	92	84
Sunbury—	County Council .. .. .	2	132	121
Shepperton .. .. .	Shepperton and Littleton District Nursing Association	1	73	74
Uxbridge .. .. .	County Council .. .. .	4	286	333
Wembley .. .. .	Kingsbury District Nursing Association	2	128	162
" .. .. .	Wembley District Nursing Association	3	252	315
Wood Green .. .. .	Borough Council .. .. .	3	154	189
Yiewsley and West Drayton	County Council .. .. .	4	228	249
Totals .. .. .		65	4,395	5,061

BIRTHS ATTENDED BY MIDWIVES.—Of the total number of midwives residing in the area of Middlesex supervised by the County Council, who notified their intention to practise, returns were received from 116 who had actually practised in 1939 and from 112 in 1940, setting out the number of cases attended by them in the capacity of midwife or maternity nurse. Medical officers of health of boroughs and urban districts in the County, which also are local supervising authorities, have been good enough to supply me with similar information relating to their respective districts, so that it has been possible to compile the following comprehensive table referring to the entire administrative county.

Boroughs and Urban Districts	Births attended by Midwives				Births at which Midwives acted as Nurses			
	In Patients' Homes		In Nursing Homes		In Patients' Homes		In Nursing Homes	
	1939	1940	1939	1940	1939	1940	1939	1940
Acton ... ..	425	522	3	1	64	22	54	—
Brentford and Chiswick ... ..								
Feltham ... ..	461	456	—	—	42	26	—	—
Finchley ... ..	208	224	8	23	39	27	115	24
Friern Barnet ... ..	126	121	—	—	10	12	—	—
Hayes and Harlington ... ..	595	570	—	—	58	71	60	65
Hornsey ... ..	309	342	3	3	36	36	270	91
Potters Bar ... ..	51	65	—	—	66	67	—	—
Ruislip-Northwood ... ..	291	295	27	22	125	118	105	61
Southall ... ..	305	331	93	100	32	58	77	57
Southgate ... ..	181	181	2	3	66	60	435	378
Staines ... ..	294	303	—	—	109	110	—	—
Sunbury ... ..	177	171	—	—	28	30	—	—
Uxbridge ... ..	280	321	21	30	63	60	86	57
Wembley ... ..	235	309	37	40	184	168	196	150
Wood Green ... ..	127	194	66	—	48	65	88	—
Yiewsley and West Drayton ... ..	205	235	—	38	23	14	—	58
Attended by midwives residing outside the County Council's area...	62	24	—	—	23	23	—	—
Totals...	4,332	4,664	260	260	1,016	967	1,486	941
Ealing ... ..	743	667	58	52	209	146	118	180
Edmonton ... ..	673	1,751	—	—	132	88	—	—
Enfield ... ..	693	687	3	6	230	261	38	20
Harrow ... ..	764	886	91	47	307	269	410	292
Hendon ... ..	408	356	—	—	140	177	258	155
Heston and Isleworth ... ..	527	543	5	6	123	94	174	122
Tottenham ... ..	721	777	1	2	97	93	1	1
Twickenham ... ..	456	522	1	327	162	141	199	203
Willesden ... ..	691	513	1	—	230	128	31	4
Grand totals ... ..	10,008	11,366	420	700	2,646	2,364	2,715	1,918

The total number of births in the whole County in 1939 was 31,871, and 10,428 (33 per cent.) of these were attended by midwives, whilst 5,361 (17 per cent.) were attended by practising midwives in the capacity of maternity nurses.

In 1940, of 29,517 births, 12,066 (41 per cent.) were attended by midwives and 4,282 (14 per cent.) by practising midwives acting as maternity nurses.

NOTIFICATIONS.—The number of notifications received from midwives, in accordance with the Rules of the Central Midwives Board, during the years 1937–40, was as follows :—

Notifications	1937	1938	1939	1940
Sending for medical assistance .. ..	1,330	1,348	1,511	1,675
Still-birth .. ..	59	54	61	59
Death of infant .. ..	38	33	25	33
Death of mother .. ..	1	1	2	2
Laying out the dead .. ..	25	15	34	23
Artificial feeding.. ..	48	35	50	53
Liability to be a source of infection .. ..	121	98	76	52
Totals .. ..	1,622	1,584	1,759	1,897



**MATERNAL DEATHS.**—Two notifications in 1939 and two in 1940 related to the deaths of women while actually under the care of a midwife. To these cases must be added the number of deaths of women who, while being attended by midwives, became so seriously ill that transfer to a hospital was necessitated, where they subsequently died. Four cases of this nature occurred in 1939 and three in 1940. The maternal death-rate among midwives' cases in both 1939 and 1940 was 1·30 per 1,000 births attended. (The maternal death-rate for all births in the administrative County during 1939 was 2·86 and in 1940 2·12 per 1,000.)

**PUERPERAL PYREXIA.**—The following table records the number of notifications of puerperal pyrexia (*a*) in the county generally, and (*b*) in the area for which the County Council is the local supervising authority, together with details concerning midwives' cases in the latter area.

Year	Births Registered		Cases Notified		Deaths from Puerperal Sepsis		Births attended by Midwives	Cases notified in the Practices of Midwives	Deaths from Puerperal Sepsis in the Practices of Midwives
	( <i>a</i> )	( <i>b</i> )	( <i>a</i> )	( <i>b</i> )	( <i>a</i> )	( <i>b</i> )	( <i>b</i> )	( <i>b</i> )	( <i>b</i> )
1939	31,871	13,248	501	127	22	13	4,592	23	Nil
1940	29,517	12,573	361	75	18	11	4,924	21	1

**OPHTHALMIA NEONATORUM.**—During 1939 medical assistance was sought by certified midwives on account of inflammation of, or discharge from, infants' eyes in 85 instances; and in 15 of these cases the medical practitioners called in notified the condition as ophthalmia neonatorum. In 1940 the numbers were 114 and 9. No apparent injury to vision resulted in any instance.

**VISITS OF INSPECTION.**—Visits made by the Council's supervisors of midwives during 1939 and 1940 may be classified as follows:—

	1939.	1940.
Visits to State certified midwives	499	636
„ women not certified under the Midwives Acts	4	—
„ patients' homes for supervision of nursing visits, etc.	74	374
„ premises in connection with the registration of nursing homes	238	219
„ ante-natal clinics and welfare centres	155	214
„ homes of foster-mothers in connection with child life protection	9	13
Total	979	1,456

**POST-CERTIFICATE INSTRUCTION.**—Rules, framed in accordance with Section 7 (1) of the Midwives Act, 1936, requiring midwives to attend a course of instruction, were issued by the Central Midwives Board, and arrangements were made in 1939 for six midwives to attend an approved residential course extending over four weeks at the St. John's Post-Certificate School, Camberwell. At the outbreak of war, these rules were suspended by the Board. Four of the midwives attending the courses also received two weeks' training in the administration of gas and air analgesia, and during 1940 five other midwives received similar training.

A non-residential course of post-certificate instruction, arranged in conjunction with the London County Council, was held in the spring of 1939, but the usual autumn course had to be cancelled, and no course was held in 1940. The spring course was attended by 67 midwives practising in the area supervised by the County Council.

**PROHIBITION OF UNQUALIFIED PERSONS ACTING AS MATERNITY NURSES FOR GAIN.**—The Minister of Health made an order, which came into force on 1st November, 1939, applying Section 6 of the Midwives Act, 1936, to the area for which the County Council is the local supervising authority. From that date it has been illegal for the nursing of a woman in childbirth to be carried out for gain by any person who is not either a legally qualified medical practitioner, a State-certified midwife, a State-registered general nurse, or a woman who, before 1st January, 1937, was certified by the authorities of a hospital approved by the Ministry of Health to have been trained in obstetric nursing, and who has given notice in writing to the council that she is so certified.

Eight women notified the County Council of their training in obstetric nursing during 1939 and seven in 1940. Warning was given to a number of women who had acted as maternity nurses, but who are now debarred by the application of this section of the Midwives Act from so doing, but no legal proceedings were instituted.

PAYMENT OF FEES TO MEDICAL PRACTITIONERS.—The following table gives information regarding fees paid by the County Council to medical practitioners called in by midwives on account of illness or abnormality occurring during pregnancy, labour or puerperium.

Calendar Year	A		B		C			D				
	Number of notifications of sending for Medical Aid	Number of Claims for Fees received	Percentage of B to A	Total amount due to Doctors in respect of cases attended by them during financial year			Income from Patients in respect of Doctors' fees					
						£	s.	d.		£	s.	d.
1939 ...	1,511	1,081	71.5	1939-40	1,459	0	0	1939-40	308	17	0	
1940 ...	1,675	1,242	74.1	1940-41	1,781	16	9	1940-41	293	14	0	

NURSING HOMES.

The following table shows the number of registered nursing homes in each borough and urban district for which the County Council is the authority for the supervision of nursing homes. The figures in brackets indicate the number of homes devoted, either wholly or in part, to the reception of maternity cases.

Boroughs and Urban Districts					Number of Nursing Homes on Register at end of year			Approved accommodation (beds) at end of year		
					1939		1940		1939	1940
Acton ( <i>Borough</i> )	...	...	...	...	6	(1)	4	(0)	20	10
Brentford and Chiswick ( <i>Borough</i> )	...	...	...	...	7	(3)	7	(3)	55	59
Feltham	...	...	...	...	1	(0)	1	(0)	6	6
Finchley ( <i>Borough</i> )	...	...	...	...	13	(4)	15	(4)	92	108
Friern Barnet	...	...	...	...	0	(0)	0	(0)	0	0
Hayes and Harlington	...	...	...	...	2	(1)	2	(1)	8	8
Hornsey ( <i>Borough</i> )	...	...	...	...	19	(8)	15	(7)	198	181
Potters Bar	...	...	...	...	0	(0)	0	(0)	0	0
Ruislip-Northwood	...	...	...	...	6	(4)	5	(3)	24	16
Southall ( <i>Borough</i> )	...	...	...	...	2	(1)	3	(1)	21	32
Southgate ( <i>Borough</i> )	...	...	...	...	6	(6)	7	(6)	60	63
Staines	...	...	...	...	2	(0)	2	(0)	24	24
Sunbury	...	...	...	...	1	(0)	1	(0)	15	15
Uxbridge	...	...	...	...	3	(1)	2	(1)	29	27
Wembley ( <i>Borough</i> )	...	...	...	...	9	(6)	7	(5)	46	40
Wood Green ( <i>Borough</i> )	...	...	...	...	2	(1)	1	(0)	14	4
Yiewsley and West Drayton	...	...	...	...	0	(0)	0	(0)	0	0
Totals					79	(36)	72	(31)	612	593

Births Occurring in Nursing Homes during 1939 and 1940.—An enquiry was made as to the number of births which occurred in nursing homes in the County. In addition to information obtained directly from proprietors of nursing homes registered by the County Council, the following table contains similar particulars with regard to nursing homes in Ealing, Edmonton, Enfield, Harrow, Hendon, Heston and Isleworth, Tottenham, Twickenham and Willesden, which have been kindly supplied by the respective medical officers of health, and thus furnishes a comprehensive figure for the whole administrative County.

Attended by	County Council's Area	Ealing	Edmonton	Enfield	Harrow	Hendon	Heston & Isleworth	Tottenham	Twickenham	Willesden	Administrative County
1939											
(a) Doctors ..	1,486	226	0	0	410	258	174	0	199	31	2,784
(b) State certified midwives, no doctor being in attendance..	260	58	0	3	91	0	5	0	1	1	420
Totals ..	1,746	284	0	3	501	258	179	0	200	32	3,204
1940											
(a) Doctors ...	1,196	180	0	20	427	155	122	4	203	4	2,307
(b) State certified midwives, no doctor being in attendance ...	260	52	0	6	47	0	6	2	327	0	700
Totals ...	1,456	232	0	26	474	155	128	2	530	4	3,007



## MATERNITY AND CHILD WELFARE SERVICE.

The County Council is the authority for maternity and child welfare in 9 of the 26 districts included in the administrative County, viz., the Urban Districts of Feltham, Friern Barnet, Hayes and Harlington, Potters Bar, Ruislip-Northwood, Staines, Sunbury, Uxbridge, and Yiewsley and West Drayton.

The following is a summary of certain statistics relating to the maternity and child welfare area of the County Council :—

	1939	1940
Area .. .. .	53,535 acres	
Population (estimated by Registrar General) .. ..	281,170	295,640
Live-births .. .. .	5,624	5,656
Birth-rate .. .. .	20·0	19·1
Number of infant deaths .. .. .	302	310
Infantile mortality rate, per 1,000 live-births .. ..	53·7	54·8
Number of maternal deaths .. .. .	10	12
Maternal mortality rate, per 1,000 total births .. ..	1·78	2·06
Number of cases of puerperal pyrexia .. .. .	52	34
„ ophthalmia neonatorum .. .. .	17	6

During 1939 and 1940 the Council's staff was augmented by the appointment of three additional health visitors and school nurses. One new infant welfare centre was opened at Christ Church, Bourne Estate, Hayes, one was transferred to new premises at Cranborne Welfare Centre, Mutton Lane, Potters Bar, and one additional ante-natal clinic was started at St. Mary's Hall, South Ruislip. At the outbreak of war two assistant medical officers were called up for military service, and the remainder were transferred for some weeks to the Council's general hospitals to help to deal with the numbers of air raid casualties that were expected. A skeleton staff of health visitors was retained for attendance at the welfare centres to advise mothers, and supervise the distribution of milk foods, and the remainder of the health visiting staff were diverted to duties at first aid posts and to assisting in maternity nursing, as the amount of work undertaken by the Council's midwives was suddenly increased on account of the evacuation of maternity hospitals and departments in London. The work of the ante-natal clinics was carried on without interruption. By October, 1939, all the health visiting staff had returned to their normal duties, and medical consultations at the welfare centres were re-started in November. Additional sessions were arranged to obviate crowding at the centres, and the afternoon sessions were held earlier, so that all mothers attending could be home before black-out time in the winter.

The frequent daylight alerts in the autumn of 1940 interfered with the attendances at the centres, and in a few instances clinics were in abeyance for a short time on account of damage or time bombs. By the end of 1940, however, the service was practically normal.

ATTENDANCES AT WELFARE CENTRES.—The following table gives the attendances of women and children at the Council's welfare centres :—

<i>Ante-natal Clinics—</i>	1939	1940
Number of sessions held ... ..	725	1,050
New Cases attending ... ..	3,123	3,389
Post-natal Cases attending ... ..	277	354
Total attendances ... ..	11,985	11,266
<i>Welfare Centres—</i>		
Number of sessions held ... ..	2,897	3,523
New Cases attending—		
Expectant mothers ... ..	100	103
Infants under 1 year of age ... ..	4,485	5,183
Children (1 to 5 years) ... ..	2,101	2,398
Attendances—		
Expectant mothers... ..	404	381
Mothers attending with infants ... ..	140,872	133,680
Infants ... ..	76,260	82,891
Children (1–5 years) ... ..	74,654	64,984
Total attendances ... ..	292,190	281,936
Average attendance of infants and children each session ...	52	42

HOME VISITS BY HEALTH VISITORS.—The home visiting undertaken by the County Council's health visitors is shown in the following table :—

	1939	1940
Pre-natal visits ... ..	3,927	3,843
Visits to infants under 1 year ... ..	27,957	27,127
Visits to children (1–5 years) ... ..	32,842	30,636
Total home visits ... ..	64,726	61,606
Total number of visits to individual families ... ..	54,383	50,337

PROVISION OF MILK, ETC.—The following table gives information as to the cost of fresh and dried milk, &c., issued at the centres during the *financial* years 1939-40 and 1940-41 :—

Year 1939-40	Amount	Cost Price	Contributed by Mothers	Charge on Scheme
		£ s. d.	£ s. d.	£ s. d.
Fresh milk .. .. .	150,806 gal. (approx.)	17,594 0 3	—	17,594 0 3
Dried milk .. .. .	80,997 lbs. (approx.)	6,074 15 4	3,491 16 2	2,582 19 2
Cod-liver oil, malt, &c. .. ..	—	3,474 14 6	1,678 0 9	1,796 13 9
	<b>Totals</b> ..	27,143 10 1	5,169 16 11	21,973 13 2

  

Year 1940-41	Amount	Cost Price	Contributed by Mothers	Charge on Scheme
		£ s. d.	£ s. d.	£ s. d.
Fresh milk ... .. .	48,127 gallons (approx.)	7,219 0 0	—	7,219 0 0
Dried milk ... .. .	31,882 lbs. (approx.)	3,321 0 0	2,346 0 0	975 0 0
Cod-liver oil, malt, &c. ... ..	—	3,797 0 0	2,237 0 0	1,560 0 0
	<b>Totals</b> ...	14,337 0 0	4,583 0 0	9,754 0 0

In the financial year 1939-40, the net cost to the County Council showed an increase of £6,524 19s. 3d. over that for the previous year. In 1940-41, however, a decrease in expenditure of £12,219 13s. 2d. occurred, owing to the introduction of the Government scheme for the provision of fresh and national dried milk to expectant and nursing mothers and children under five years of age.

TREATMENT OF OPHTHALMIA NEONATORUM.—Arrangements exist whereby infants suffering from ophthalmia neonatorum may be admitted to St. Margaret's Hospital, Kentish Town, one of the hospitals included in the Special Hospitals Service of the London County Council. During 1939, 17 cases of ophthalmia neonatorum were notified in the area for which the County Council is the authority for maternity and child welfare. Five infants were treated at St. Margaret's Hospital, one at White Oak Hospital, Swanley, and eleven at home.

Two infants died while under treatment in hospital, fourteen made satisfactory recoveries with no apparent injury to vision, and one was still under treatment at the end of the year. At the outbreak of war St. Margaret's Hospital was evacuated to Swanley, and since that date all cases have been treated at White Oak Hospital, Swanley.

In 1940 the number of cases of ophthalmia neonatorum notified was six, of which three were treated at Swanley. All made satisfactory recoveries with no apparent injury to vision.

DENTAL TREATMENT.—The following table gives particulars of the dental work which has been carried out during the years 1939 and 1940 under the Council's maternity and child welfare scheme :—

	Mothers		Children under 5 years of age	
	1939	1940	1939	1940
Inspected ... ..	1,776	2,231	1,225	1,685
Referred for treatment ... ..	1,767	2,218	1,181	1,585
Attendances for treatment ... ..	9,878	8,774	2,792	3,954
Treatment completed ... ..	800	1,122	1,159	1,519
Administration of general anæsthetics ...	1,399	1,930	929	1,264
„ „ local „ „ ..	1,228	741	122	76
Dental extractions ... ..	9,878	12,069	3,459	4,887
Fillings ... ..	1,624	2,268	1,238	1,851
Denture dressings ... ..	2,090	2,779	—	—
Dentures fitted ... ..	578	693	—	—
„ repaired ... ..	21	—	—	—
Other operations ... ..	1,277	1,549	667	183

This table includes the dental inspection and treatment of expectant and nursing mothers and children below school age who attend welfare centres in Southall and Harrow.



CHILD LIFE PROTECTION.

At the end of 1939 there were 186 foster mothers, who had 291 children in their care.  
At the end of 1940 there were 191 persons receiving 240 children.  
Notification of the death of one infant was received in each year.  
The following visits were paid by the Council's child protection visitors :—

			First Visits	Subsequent Visits	Special Investigations
1939	...	...	167	1,194	9
1940	...	...	145	1,162	13

Inspection and Supervision of Food.

The Acts and Regulations governing the supervision of food supplies which are administered by the County Council deal with (a) certain powers and duties connected with the production of milk, and (b) adulteration of food.

MILK PRODUCTION.

For many years past the Lister Institute of Preventive Medicine has examined for tubercle bacilli samples of milk taken by inspectors of the Public Control department under the County Council's arrangements.

The following table shows the results which have been obtained since the year 1923 :—

Year					Number of samples for which a definite result was obtained	Number containing living tubercle bacilli	Percentage of tubercle-infected milk
1928	..	..	..	..	228	23	10·1
1929	..	..	..	..	277	21	7·6
1930	..	..	..	..	272	22	8·1
1931	..	..	..	..	256	14	5·5
1932	..	..	..	..	266	31	11·6
1933	..	..	..	..	287	25	8·7
1934	..	..	..	..	289	17	5·9
1935	..	..	..	..	282	21	7·4
1936	..	..	..	..	292	20	6·8
1937	..	..	..	..	282	16	5·7
1938	..	..	..	..	278	16	5·7
1939	..	..	..	..	193	10	5·1
1940	..	..	..	..	267	19	7·1

Of the 10 infected samples of milk found in 1939, one was reported to have been produced in Middlesex and 9 in other counties. Diseased animals were traced on 7 of the farms concerned (one farm in Middlesex and six in other counties) and 9 cows were slaughtered.

Of the 19 infected samples of milk found in 1940, 7 were reported to have been produced in Middlesex and 12 in other counties. Diseased animals were traced on 8 of the farms concerned (six in Middlesex and two in other counties) and 8 cows were slaughtered.

The centralised service of veterinary inspection administered by the Ministry of Agriculture (which came into force in 1938) has continued to operate throughout the period under review.

The Divisional Inspector of the Ministry of Agriculture for the area in which Middlesex is situated has furnished the County Council with information as to the results of veterinary inspections and tuberculin tests of Middlesex herds. During 1939, 6,023 clinical examinations of bovine animals were made, as a result of which 48 were found, which were suspected to be suffering from tuberculosis. Of these 48 animals, 39 were slaughtered, while in nine instances the diagnosis of tuberculosis was not confirmed.

For the year 1940 the figures were :—7,000 clinical examinations, 28 animals suspected to be suffering from tuberculosis, 22 animals slaughtered, 6 cases in which diagnosis of tuberculosis was not confirmed.

MILK (SPECIAL DESIGNATIONS) ORDERS, 1936 AND 1938.—Under the terms of these Orders, the County Council is the authority for the granting of licences to the producers of tuberculin tested and accredited milk. Every farm in respect of which an application for a licence to produce tuberculin tested or accredited milk is received, is visited by Dr. Perkins, and by the Instructor in Dairying employed by the Education Committee. The condition of the premises and the methods employed on the farm are fully investigated. A licence is granted only if the County Council, from the reports of its officers and of the divisional inspector of the Ministry of

Agriculture, is satisfied with the conditions obtaining. Farms under licence are periodically visited and samples of milk regularly subjected to bio-chemical and bacteriological examination to ensure that satisfactory methods of milk production are being maintained.

In 1939 there were in Middlesex four herds licensed for the production of tuberculin tested milk ; and at the close of the year 40 dairymen in the County had been granted licences to produce accredited milk. In 1940 there were three farmers holding T.T. licences, and at the end of the year 40 accredited licences were in force. The herds belonging to two of the holders of T.T. licences were also attested under the scheme of the Ministry of Agriculture.

ADULTERATION.

The Acts and regulations dealing with adulteration of foods and drugs are administered by the Public Control department of the County Council. I am indebted to Mr. R. A. Robinson, Barrister at Law, Chief Officer of that department, for information regarding this branch of work.

During 1939, 1,314 samples, of which 120 were found to be adulterated or not up to standard, were submitted for examination by the County Analyst, and 1,485 samples, of which 60 failed to comply with the requirements, were submitted in 1940.

In addition to the above, 4,639 samples in 1939, and 3,648 in 1940, were examined by officers of the Public Control department.

No action was taken during either year under the Public Health (Dried Milk) Regulation, 1923 and 1927, or the Public Health (Condensed Milk) Regulations, 1923 and 1927.

Infectious Diseases.

The following table sets out figures showing the incidence of notifiable infectious diseases in Middlesex during the years 1939 and 1940 :—

Disease	1939					1940				
	Cases Notified	Case rate per 1,000 Population	Fatal Cases	Case-mortality rate per cent.	Death-rate per 1,000 Population	Cases Notified	Case rate per 1,000 Population	Fatal Cases	Case-mortality rate per cent.	Death-rate per 1,000 Population
Scarlet fever ... ..	3,460	1·68	3	0·09	0·001	2,055	1·05	2	0·10	0·001
Diphtheria ... ..	1,279	0·62	59	4·61	0·03	929	0·48	42	4·52	0·02
Dysentery ... ..	48	0·02	—	—	—	18	0·01	—	—	—
Enteric fever ... ..	41	0·02	4	9·8	0·002	86	0·04	3	3·5	0·002
Erysipelas ... ..	489	0·24	—	—	—	433	0·22	—	—	—
Cerebro-spinal fever	58	0·03	22	38·0	0·01	326	0·17	58	17·8	0·03
Encephalitis lethargica, acute	3	0·001	—	—	—	12	0·01	—	—	—
Polio-myelitis, acute ...	40	0·02	4	10·0	0·002	13	0·01	} 3	—	—
Polio-encephalitis, acute	8	0·004	2	25·0	0·001	3	0·002		—	—
† Measles ... ..	—	—	2	—	0·001	9,987	5·12	19	0·19	0·01
† Whooping cough ...	—	—	47	—	0·02	1,610	0·82	16	0·99	0·01
* Pneumonia (acute) ...	1,606	0·78	—	—	—	1,548	0·79	—	—	—
* „ (all forms)	—	—	1,003	—	0·49	—	—	1,452	—	0·74
Puerperal pyrexia ...	501	‡15·9	22	4·39	‡0·70	361	‡12·5	18	4·99	‡0·62
Ophthalmia neonatorum	115	‡3·65	—	—	—	68	‡2·36	—	—	—
Malaria ... ..	4	0·002	—	—	—	14	0·01	—	—	—

Smallpox, cholera, plague, typhus, relapsing fever, anthrax, undulant fever—No cases of these diseases were notified.

There are a number of points of interest in connection with these figures. In spite of war conditions, the incidence of most of the notifiable infectious diseases was lower—in some instances considerably lower—during 1939 and 1940 than in the years immediately preceding. Exceptions are enteric fever, which shows a small increase in 1940, and cerebro-spinal fever which shows a substantial increase. Cerebro-spinal fever is a disease associated with overcrowding (as in shelter life) and assumed serious proportions in the Great War of 1914–18. It is some satisfaction, however, to record that it is a far less fatal disease now than was formerly the case, owing to improved methods of treatment by chemo-therapy.

\* Case-mortality rate cannot be given, as only cases of acute pneumonia are notified, while the figure for deaths includes all forms of the disease.

† The notification of these diseases was not made compulsory till 23rd October, 1939, following the coming into operation of the Measles and Whooping Cough Regulations, 1939. No figures of incidence can, therefore, be given for 1939, although the number of deaths recorded provides an indirect means of comparison with other years.

‡ Case-rate per 1,000 live births.



The incidence rates of diphtheria in 1939 and in 1940 establish new low records. It would be gratifying if it could be thought that the comparatively very low incidence figures recorded were entirely due to increased resistance of the population resulting from immunisation. Although numbers of individuals have been immunised in Middlesex during recent years, it is most unlikely that the mass immunity so far obtained is sufficient so markedly to reduce the prevalence of the disease. The intensive national campaign of immunisation against diphtheria, instituted by the Ministry of Health, did not begin until the close of 1940. A more likely explanation lies in the fact that large numbers of children left Middlesex under the Government evacuation scheme at the start of the war and others left when bombing began in 1940. In consequence there was a smaller proportion of susceptible individuals in the population of Middlesex in the years in question.

The death-rates from puerperal pyrexia in 1939 and 1940 also establish two new progressively low records.

#### PUBLIC VACCINATION.

The results of the operation of the Vaccination Acts in Middlesex may be summarized as follows :—

	1938	1939
Births registered .. .. .	25,861*	25,823*
Infants successfully vaccinated .. .. .	9,903	9,065
Infants insusceptible to vaccination .. .. .	90	96
Infants who had had smallpox .. .. .	—	—
Statutory declarations of conscientious objection .. .. .	9,663	9,249
Infants died unvaccinated .. .. .	856	823
Vaccination postponed by medical certificates .. .. .	405	321
Removals to other districts .. .. .	2,108	2,609
Removals to places unknown, &c. .. .. .	1,552	2,097
Otherwise unaccounted for .. .. .	1,284	1,563

\* This figure does not include re-registered births or cases of children born in other districts.

Of 25,861 infants whose births were registered in Middlesex during 1938, 856 died unvaccinated. Of the remainder, only 9,993 (39·9 per cent.) were successfully vaccinated or were certified to be insusceptible to vaccination. Statutory declarations of conscientious objection were made in respect of 9,663 infants (38·6 per cent.) whilst 5,349 infants were not vaccinated for various other reasons.

Of 25,823 infants whose births were registered in Middlesex during 1939, 823 died unvaccinated. Of the remainder, only 9,161 (36·6 per cent.) were successfully vaccinated, or were certified to be insusceptible to vaccination. Statutory declarations of conscientious objection were made in respect of 9,249 (36·9 per cent.), whilst 5,590 infants were not vaccinated for various other reasons (postponement on medical certificate, removal, &c.).

#### ISOLATION HOSPITAL ACCOMMODATION.

(a) SMALLPOX.—The County Council is the authority for the provision of smallpox hospital accommodation for the whole of the administrative county. It has met its obligations by entering into an agreement with the London County Council whereby the very extensive accommodation provided by that authority has been made available for the reception of any smallpox cases occurring in the County of Middlesex.

(b) OTHER ACUTE SPECIFIC FEVERS.—In the Annual Report for 1938, detailed figures were given for the eleven separate isolation hospital authorities, showing the number of beds to be provided by each under the scheme prepared by the County Council, as finally modified by the Ministry of Health, together with the number of beds actually provided at the close of 1938.

These figures remained basically unaltered at the end of 1940. Certain isolation hospitals, however, were included in the emergency medical service, and provided a quota of beds for the reception of E.M.S. patients. Their names and the number of scheduled E.M.S. beds at each on 31st December, 1940, are set out below :—

	Casualty Beds.
Enfield and Edmonton Joint Isolation Hospital ... ..	235
Hendon Isolation Hospital ... ..	150
Willesden Municipal Hospital ... ..	230
South Middlesex and Richmond Isolation Hospital ... ..	220
Ealing, Claypolds Isolation Hospital ... ..	200

These figures do not represent a net loss of isolation beds, as a number of casualty beds were provided by re-arrangement of accommodation, leaving an adequate number of beds still available for infectious cases. No difficulty was experienced during 1939 and 1940 in admitting such cases of infectious disease as were in need of hospital treatment.

TUBERCULOSIS.

The number of new cases of tuberculosis reported during the years 1939 and 1940 by Medical Officers of Health of the constituent local authorities of Middlesex was 2,707 and 2,815 respectively. Besides those cases which were formally notified in 1939 and 1940, the figures include persons who had changed their place of residence from one district to another within the County, and in accordance with the Regulations were the subject of primary notification in each district.

As measured by the numbers of cases reported, the incidence rate of tuberculosis for the last four years per 1,000 living is shown below :—

		All forms of Tuberculosis	Pulmonary only
1937	...	1·15	0·96
1938	...	1·20	0·99
1939	...	1·12	0·95
1940	...	1·23	1·04

The number of deaths from tuberculosis in 1939 and 1940 is given in the following table :—

Deaths					Death-rate per 1,000 living		
Year			Pulmonary	Non-Pulmonary	Total	Middlesex	England and Wales
1939	...	...	1,012	162	1,174	0·57	0·636
1940	...	...	1,055	162	1,217	0·62	0·697

The lowest figure for the death-rate from tuberculosis in Middlesex yet recorded was 0·54 in 1938. The slight rise in 1939, with a more marked rise in 1940, illustrates how sensitive is this figure as an index of the fall in the standard of living enforced by the war.

New Cases of Tuberculosis, 1939 and 1940.

Age Periods				Pulmonary				Non-pulmonary			
				Male		Female		Male		Female	
				1939	1940	1939	1940	1939	1940	1939	1940
0-1	...	...	...	2	3	2	5	4	1	5	4
1-5	...	...	...	21	17	22	20	20	24	14	23
5-10	...	...	...	27	19	18	15	35	18	22	25
10-15	...	...	...	30	24	28	20	19	26	18	17
15-20	...	...	...	127	131	130	126	28	28	32	29
20-25	...	...	...	166	155	175	169	17	19	28	28
25-35	...	...	...	319	389	295	362	39	35	48	45
35-45	...	...	...	215	238	157	128	29	25	17	21
45-55	...	...	...	175	193	61	63	9	11	15	6
55-65	...	...	...	101	128	57	42	7	6	8	7
65 and upwards	...	...	...	48	43	21	20	5	3	7	4
Totals...	...	...	...	1,231	1,340	966	970	212	196	214	209

As will be seen from the above table, the incidence of pulmonary tuberculosis in women is more concentrated between the ages of 15 and 45, while that of men is spread more evenly between 15 and 65, with a peak for both sexes between 25 and 35.



With regard to deaths also, a far higher proportion of the total number of deaths among women occurs between the ages of 15-45 than is the case with men (*see table below*).

Deaths from Tuberculosis, 1939 and 1940.

Age Periods	Pulmonary				Non-pulmonary			
	Male		Female		Male		Female	
	1939	1940	1939	1940	1939	1940	1939	1940
0- 1 ... ..	2	1	—	2	2	3	8	4
1- 5 ... ..	5	1	4	3	16	12	13	14
5-15 ... ..	3	3	13	7	13	8	11	14
15-45 ... ..	294	316	318	333	37	40	33	32
45-65 ... ..	217	258	81	69	13	11	7	11
65 and upwards ...	48	43	27	19	2	7	7	6
Totals... ..	569	622	443	433	83	81	79	81

Between the two wars there was more or less a steady fall in notifications of and deaths from tuberculosis. Now this steady fall has ceased, and the figures suggest that the curve is beginning to rise again. The following table illustrates this.

Tuberculosis of Respiratory System					All forms of Tuberculosis			
Year	Number of Notifi- cations	Rate per 1,000 Living	Number of Deaths	Death-rate per 1,000 Living	Number of Notifi- cations	Rate per 1,000 Living	Number of Deaths	Death-rate per 1,000 Living
1920	1,887	1.48	974	0.76	2,218	1.74	1,178	0.92
1925	1,630	1.25	922	0.71	1,982	1.52	1,097	0.84
1930	1,623	1.04	981	0.63	2,015	1.29	1,164	0.75
1931	1,749	1.07	989	0.60	2,120	1.29	1,160	0.71
1932	1,733	1.02	965	0.57	2,108	1.24	1,144	0.67
1933	1,750	1.00	1,046	0.60	2,082	1.19	1,224	0.70
1934	1,767	0.98	1,086	0.60	2,098	1.16	1,266	0.70
1935	1,826	0.98	1,028	0.55	2,151	1.15	1,187	0.64
1936	1,833	0.94	1,096	0.56	2,151	1.11	1,257	0.65
1937	1,932	0.96	1,008	0.50	2,312	1.15	1,177	0.58
1938	2,048	0.99	932	0.45	2,469	1.20	1,109	0.54
1939	1,952	0.95	1,012	0.49	2,313	1.12	1,174	0.57
1940	2,043	1.04	1,055	0.54	2,410	1.23	1,217	0.62

In the table on page 28 are set out details relating to notifications of, and deaths from, tuberculosis in each district in Middlesex during the years 1939 and 1940, together with the number of persons whose names were on the tuberculosis registers of the various local authorities at the close of each of these years.





## SCHEME FOR THE PREVENTION AND TREATMENT OF TUBERCULOSIS.

## (a) CHEST CLINICS.

Particulars relating to the County chest clinics at the close of 1940 are set out in the table below. The only change in these arrangements from those existing in 1938 is that the sub-clinics in Area 5 have ceased to be used. Only small numbers of patients were attending these clinics, and, with the development of the main clinic, it was considered wasteful to continue to maintain them. In Area 4, the sub-clinic at 156, High Street, Uxbridge, was transferred to the Local County Offices, Uxbridge, at the end of 1939.

Areas	Districts served	Tuberculosis Medical Officers	Main Clinics	Sub-Clinics
1	Edmonton, Enfield .. ..	Dr. H. Evans ..	279, Fore Street, Edmonton	—
1A	Tottenham .. ..	Dr. S. T. Davies ..	140, West Green Road, Tottenham	—
2	Finchley, Friern Barnet, Hornsey, Potters Bar, Southgate, Wood Green	Dr. J. R. B. Dobson	655, High Road, N. Finchley	10, Alexandra Road, Hornsey
2A	Harrow, Hendon, Ruislip-Northwood	Dr. A. S. Hall ..	Redhill Chest Clinic, Edgware	53, Greenhill Crescent, Harrow
3	Wembley, Willesden ..	Dr. O. Bruce.. ..	Pound Lane, Willesden	—
4	Acton, Ealing, Hayes and Harlington, Southall, Uxbridge, Yiewsley and West Drayton	Dr. J. T. N. Roe ..	Green Man Passage, Uxbridge Road, West Ealing	Local County Offices, Uxbridge
5	Brentford & Chiswick, Feltham, Heston & Isleworth, Staines, Sunbury, Twickenham	Dr. G. G. Kayne ..	28, Bell Road, Hounslow.	

During 1940 X-ray apparatus was installed at the chest clinics at Hounslow and Ealing, and in October, 1940, the County Council appointed the first chest clinic radiographer, whose duties were divided between these two clinics.

Before 1939, measures of active treatment had not normally been undertaken at the Council's chest clinics. After the outbreak of war an artificial pneumothorax clinic was started at Redhill Chest Clinic, and in the middle of 1940 a refill clinic was also started at Hounslow Chest Clinic. The active treatment carried out at these two clinics has rapidly extended. Certain specialised forms of out-patient treatment are, in addition, available for County patients at the County sanatoria, County hospitals, voluntary hospitals and elsewhere.

## (b) INSTITUTIONAL ACCOMMODATION.

The following statement shows the number of beds for pulmonary cases belonging to, or reserved for the use of, the Council at the end of 1939 and 1940.

Institutions	Beds							
	Adults				Children		Totals	
	M.		F.					
	1939	1940	1939	1940	1939	1940	1939	1940
Harefield County Sanatorium ... ..	80	108	84	108	30	68	194	284
" " " (observation) ... ..	2	4	1	4	5	10	8	18
Clare Hall County Sanatorium ... ..	85	170	92	74	—	—	177	244
White House, Milford ... ..	—	—	39	—	—	—	39	—
Danesbury Manor, Welwyn ... ..	—	—	—	43	—	—	—	43
Totals ... ..	167	282	216	229	35	78	418	589

The peace time complement of beds at Harefield had been 385 and at Clare Hall 198. On the outbreak of war a number of patients were discharged on the instructions of the Government, and the accommodation re-arranged in order to provide a number of casualty beds. This accounts for the reduction in bed numbers at both sanatoria shown in the foregoing table. Early in 1940 the position was largely restored, sanatorium beds no longer being ear-marked for casualty purposes, with the exception of 100 beds at Harefield, where, by reason of the admirable facilities present, the Ministry of Health had established a thoracic surgical unit. Moreover, additional temporary accommodation was secured by placing beds in certain recreation and rest rooms at Harefield, and by somewhat reducing the space between beds at Clare Hall. At the end of 1940, therefore, the position was that there were available for sanatorium purposes 302 beds at Harefield and 244 at Clare Hall, a total deficit of 37 beds as compared with the pre-war position.

Pulmonary cases in excess of the number of beds at the disposal of the Council, and patients suffering from non-pulmonary tuberculosis, are maintained in sanatoria or hospitals belonging to voluntary organisations or other local authorities in various parts of England.

Prior to the outbreak of war and, indeed, up to the middle of 1940, a mean number of some 450 to 500 patients suffering from pulmonary and some 200 to 250 suffering from non-pulmonary tuberculosis were maintained by the County Council in outside sanatoria and hospitals. Towards the end of 1940, however, these figures fell considerably, so that by 4th December, 1940, the numbers were : pulmonary, 328 ; non-pulmonary, 169. This drop is to be accounted for by a number of reasons associated with the war. The air raids on London, which started in the autumn of 1940, resulted in many people leaving sanatoria because they wanted to be with their families, and for the same reason many people at this time refused to go away for treatment. Moreover, those sanatoria situated on the coast lost a number of their patients on account of invasion fears.

The accommodation at the White House, Milford-on-Sea, which the Council acquired in 1938 and adapted to receive 24 convalescent tuberculous women, was extended in November, 1939, to take 39 beds. Owing to its position on the coast, the White House became unsuitable for use in 1940, and the patients were transferred in July to Danesbury Manor, Welwyn, where there is accommodation for 43 patients.

Patients are admitted to Danesbury by transfer from Harefield and Clare Hall, and continuous supervision of their treatment is secured, as Danesbury is visited by Dr. Houghton from Harefield and Dr. Thompson from Clare Hall. The institution is equipped with an X-ray screening plant, so that artificial pneumothorax, induced at the main sanatoria, can be maintained during a patient's stay at Danesbury. Radiography, other than screening, dental or other special treatment, is provided for Danesbury patients at Clare Hall.

The arrangement that the County Council had made with the Royal Chest Hospital, City Road, London, whereby a ward of 24 beds was reserved for Middlesex cases, terminated in September, 1939, owing to war conditions.

The following tables, in a very brief statistical form, give some indication of the work carried out during the two years at Harefield and Clare Hall Sanatoria.

HAREFIELD COUNTY SANATORIUM.  
*Admissions, Discharges and Deaths.*

	In the sanatorium on 31st Dec.		Admitted during the year		Discharged during the year		Deaths		Remaining in the sanatorium on 31st Dec.	
	1938	1939	1939	1940	1939	1940	1939	1940	1939	1940
<i>Treatment :</i>										
Adults—										
Men ...	149	79	238	182	282	143	26	15	79	103
Women ...	145	82	284	223	319	189	28	11	82	105
Children—										
Boys ...	35	19	41	45	56	29	1	3	19	32
Girls ...	28	11	41	44	53	20	5	3	11	32
<i>Observation :</i>										
Adults—										
Men ...	2	2	33	30	33	29	—	—	2	3
Women ...	6	1	33	24	38	23	—	—	1	2
Children—										
Boys ...	3	3	22	10	22	12	—	—	3	1
Girls ...	3	2	16	10	17	10	—	—	2	2
Totals ...	371	199	708	568	820	455	60	32	199	280



SPECIAL TREATMENT.—The following measures were carried out upon patients who were discharged during 1939 and 1940 :—

	1939	1940
Unilateral artificial pneumothorax ... ..	84	39
"          "          "          combined with other measures (adhesion section, phrenic crush, etc.) ... ..	65	61
Bilateral pneumothorax ... ..	8	2
"          "          combined with other measures ... ..	11	2
Extrapleural pneumothorax ... ..	9	5
Phrenic crush only ... ..	15	23
Thoracoplasty ... ..	13	26
Other operations for chest conditions ... ..	1	5
Cases that received gold treatment ... ..	41	11

In June, 1939, a beginning was made in several branches of occupational therapy. Throughout 1940 much useful work has continued to be done in this department.

OUT-PATIENT DEPARTMENT.—During 1939, a total of 3,239 attendances were made by patients for artificial pneumothorax refills. In 1940 there were 2,095 attendances for this purpose.

RESULTS OF TREATMENT.—The following table shows the condition of patients discharged after treatment during the years 1939 and 1940 :—

Stage of disease on admission	Number discharged		Condition on Discharge						Died (per cent.)		
			Quiescent (per cent.)		Improved (per cent.)		No material improvement (per cent.)				
	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	
Class T.B. minus—											
Men ... ..	38	35	36·8	37·2	57·9	51·4	5·3	11·4	—	—	
Women ... ..	73	50	54·8	32·0	38·4	54·0	6·8	14·0	—	—	
Children ... ..	93	49	26·9	49·0	65·6	47·0	6·4	2·0	1·1	2·0	
Total ... ..	204	134	38·7	39·6	54·4	50·7	6·4	9·0	0·5	0·7	
Class T.B. plus—											
Group I—											
Men ... ..	20	10	20·0	40·0	70·0	50·0	5·0	—	5·0	10·0	
Women ... ..	13	10	38·5	10·0	53·8	70·0	7·7	20·0	—	—	
Children ... ..	5	1	—	—	100·0	100·0	—	—	—	—	
Total ... ..	38	21	23·7	23·8	68·4	61·9	5·3	9·5	2·6	4·8	
Class T.B. plus—											
Group II—											
Men ... ..	138	91	9·4	22·0	71·0	63·7	16·0	9·9	3·6	4·4	
Women ... ..	182	97	16·0	13·4	56·0	77·3	24·7	6·2	3·3	3·1	
Children ... ..	6	—	—	—	100·0	—	—	—	—	—	
Total ... ..	326	188	12·9	17·6	63·2	70·7	20·6	8·0	3·3	3·7	
Class T.B. plus—											
Group III—											
Men ... ..	112	22	1·8	4·5	50·9	22·7	29·5	27·3	17·8	45·5	
Women ... ..	79	43	—	7·0	19·0	7·0	53·2	67·4	27·8	18·6	
Children ... ..	7	5	—	—	—	—	28·6	—	71·4	100·0	
Total ... ..	198	70	1·0	5·7	36·4	11·4	38·9	50·0	23·7	32·9	

CLARE HALL COUNTY SANATORIUM.  
Admissions, Discharges and Deaths.

			In the Sanatorium on 31st December		Admitted during the Year		Discharged during the Year		Deaths		Remaining in the Sanatorium on 31st December	
			1938	1939	1939	1940	1939	1940	1939	1940	1939	1940
Males	...	...	132	83	212	312	229	214	32	18	83	163
Females	...	...	65	63	139	159	130	134	11	17	63	71
Totals	...	...	197	146	351	471	359	348	43	35	146	234

SPECIAL TREATMENT.—The following measures were carried out upon patients who were discharged during 1939 and 1940 :—

								1939	1940
Artificial pneumothorax	...	...	...	...	...	...	...	110	138
„	„	combined with other measures						101	106
„	„	attempted but failed						52	38
Phrenic nerve operations	...	...	...	...	...	...	...	46	50
Cauterization of adhesions	...	...	...	...	...	...	...	71	94
Extrapleural pneumothorax	...	...	...	...	...	...	...	17	16
Thoracoplasty	...	...	...	...	...	...	...	17	10
Gas replacements or lavage	...	...	...	...	...	...	...	20	9
Other operations	...	...	...	...	...	...	...	13	11
Cases that received gold treatment	...	...	...	...	...	...	...	45	14

The number of artificial pneumothorax refills carried out in the sanatorium upon in-patients and out-patients were 4,761 in 1939 and 6,766 in 1940.

Results of Treatment.

Stage of Disease on Admission			Quiescent		Improved		No Improve- ment		Died		Totals		Total (per cent.)	
			1939	1940	1939	1940	1939	1940	1939	1940	1939	1940	1939	1940
Class T.B. minus—														
Males	...	...	8	22	3	3	3	4	0	0	14	29	—	—
Females	...	...	11	17	1	4	0	2	0	1	12	24	—	—
Total	...	...	19	39	4	7	3	6	0	1	26	53	7·2	14·4
Class T.B. plus—														
Group I—														
Males	...	...	3	7	4	0	1	1	0	0	8	8	—	—
Females	...	...	6	3	2	2	0	0	0	0	8	5	—	—
Total	...	...	9	10	6	2	1	1	0	0	16	13	4·4	3·5
Class T.B. plus—														
Group II—														
Males	...	...	39	26	29	41	15	12	2	0	85	79	—	—
Females	...	...	22	37	29	19	7	1	0	0	58	57	—	—
Total	...	...	61	63	58	60	22	13	2	0	143	136	39·5	36·9
Class T.B. plus—														
Group III—														
Males	...	...	4	9	61	40	38	38	30	18	133	105	—	—
Females	...	...	2	3	9	18	22	25	11	16	44	62	—	—
Total	...	...	6	12	70	58	60	63	41	34	177	167	48·9	45·2



STATISTICAL SURVEY OF THE WORK CARRIED OUT UNDER THE COUNTY TUBERCULOSIS SCHEME  
DURING 1939 AND 1940.

In previous Annual Reports very detailed statistical tables have appeared, reproducing the returns which in the past have been required by the Ministry of Health. On the outbreak of war, the Ministry, realising the great amount of clerical work involved in compiling these figures and having regard to the shortage of staff, substituted a simple and much curtailed quarterly form of return. Tables comparable with those formerly published are, therefore, no longer available, but the following brief statistical particulars give some indication of the volume of the work being done by the Council under its Tuberculosis Scheme.

(a) *Cases on the Chest Clinic Registers.*

Number of definite cases of tuberculosis on the Registers at the							
beginning of 1939	...	...	...	...	...	...	6,597
Number at end of 1939	...	...	...	...	...	...	7,048
Number at end of 1940	...	...	...	...	...	...	7,401

(b) *Admissions to and Discharges from Sanatoria and Hospitals (other than the Council's General Hospitals).*

Year.				Admissions.			Discharges.
1939	...	...	...	Men, 1,028	...	...	1,111
				Women, 969	...	...	1,053
				Children, 202	...	...	232
1940	...	...	...	Men, 963	...	...	885
				Women, 792	...	...	772
				Children, 190	...	...	173

VENEREAL DISEASE.

For many years Middlesex has been a partner in a joint scheme with London and a number of surrounding counties and county boroughs for the provision of treatment for venereal disease. The scheme is organized and administered by the London County Council on behalf of the members of the scheme, proposals being submitted each year by the London County Council for the consideration of the participating authorities and consultations and conferences between the respective medical officers of health taking place from time to time. The scheme is chiefly based upon the voluntary hospitals of London, at a number of which clinics for the treatment of venereal disease have been established.

A summary showing the figures relating to the hospitals participating in the scheme, as a whole, during the past five years, is given in the table on p. 34. There has been a pronounced drop in the number of new cases attending the hospitals during 1939 and 1940 and this is very possibly due to the shift in population and the calling up for military service of large numbers of young adults. The efficacy of treatment of gonorrhœa by sulphonamide compounds, much reducing the number of attendances necessary per person before cure, doubtless accounts in great measure for the large fall in total attendances.

THE PRINCE OF WALES'S GENERAL HOSPITAL, TOTTENHAM.—In addition to its provisions under the joint scheme, the Middlesex County Council has an agreement with the Governors of the Prince of Wales's General Hospital, Tottenham, under which the Hospital, in consideration of an annual payment by the County Council for a term of years, has built, equipped and staffed a self-contained clinic for the treatment of venereal disease. This clinic has continued to play a very valuable part in the scheme, especially in the facilities available for Middlesex patients, although during the past two years, there has been a drop in new attendances comparable to that noted in the case of the other hospitals participating in the joint scheme.

Comparative Statement for the Past Five Years.

MIDDLESEX Patients treated at										
	London Hospitals					Prince of Wales's General Hospital, Tottenham *				
	1936	1937	1938	1939	1940	1936	1937	1938	1939	1940
Number of persons dealt with at the clinics for the first time and found to be suffering from :—	Syphilis ..	275	332	322	254	217	76	86	71	45
	Soft chancre ..	8	4	5	4	—	8	8	2	—
	Gonorrhœa ..	1,091	1,115	1,096	831	645	197	162	184	92
	Conditions other than venereal ..	1,475	1,647	1,759	1,558	1,143	158	148	223	176
	Totals ..	2,849	3,098	3,182	2,647	2,005	439	404	480	313
Total attendances ..		102,650	99,687	90,699	72,648	48,910	29,071	30,129	18,653	13,197
Number of "in-patient" days of treatment ..		3,737	3,470	4,367	2,517	1,276	370	123	391	200

\* These figures do not include non-residents of the County treated at the hospital, the cost being borne by the Middlesex County Council under the agreement with the hospital.



## INDEX.

	PAGE		PAGE
Acreage ... ..	1	Medical Education ... ..	14
Anthrax ... ..	24	Middlesex County Hospital, Harefield Place...	v
Area ... ..	1	Midwives Acts, administration of ... ..	17
Births and birth-rates ... ..	1, 18, 20	Midwives, domiciliary service ... ..	17
Bushey Heath Maternity Hospital ... ..	v	Milk production ... ..	23
Central Middlesex County Hospital ... ..	iv, 12, 15	Natural and social conditions ... ..	1
Cerebro-spinal fever... ..	24	North Middlesex County Hospital ... ..	iv, 15
Chase Farm Emergency Hospital ... ..	v, 12	Nursing homes ... ..	20
Chest Clinics ... ..	29	Ophthalmia neonatorum ... ..	19, 22, 24
Child life protection ... ..	23	Plague ... ..	24
Cholera ... ..	24	Pneumonia ... ..	24
Civil Defence casualty services ... ..	7	Polioencephalitis and Poliomyelitis ... ..	24
Civil Nursing Reserve ... ..	14	Population ... ..	1
Convalescent Home, Edgbury ... ..	v	Prince of Wales's General Hospital, Tottenham	33
Danesbury Manor Convalescent Home ... ..	29, 30	Puerperal pyrexia ... ..	19, 24
Deaths and death-rates ... ..	2	Redhill County Hospital ... ..	iv, 12
Dental treatment ... ..	22	Relapsing fever ... ..	24
Diphtheria ... ..	24	Sanatoria staff ... ..	...v, vi
District nursing associations ... ..	17	Sanatorium, County, Clare Hall ... ..	vi, 30, 32
Dysentery ... ..	24	"    "    Harefield ... ..	v, 30
Edgbury Convalescent Home ... ..	v	Scarlet fever ... ..	24
Encephalitis lethargica ... ..	24	Smallpox ... ..	24
Enteric fever... ..	24	Social conditions, natural and ... ..	1
Erysipelas ... ..	24	Staff ... ..	iii
Food and drugs, adulteration ... ..	24	Staines County Hospital ... ..	v, 14
,, inspection and supervision ... ..	23	Statistics, summary of ... ..	vi
Hillingdon County Hospital ... ..	v, 12, 14	Tuberculosis ... ..	26
Hospitals, fever ... ..	25	,, clinics ... ..	29
,, general ... ..	11	,, institutions ... ..	29
,, isolation ... ..	25	,, scheme ... ..	29
,, smallpox ... ..	25	Typhoid fever ... ..	24
,, staff ... ..	iv	Typhus ... ..	24
Infantile mortality ... ..	5	Undulant fever ... ..	24
Infectious diseases ... ..	24	Vaccination ... ..	25
Malaria ... ..	24	Venereal disease ... ..	33
Maternal deaths ... ..	19	West Middlesex County Hospital ... ..	v, 12, 14
,, mortality ... ..	6	White House, Milford ... ..	29, 30
Maternity and child welfare service ... ..	21	Whooping cough ... ..	24
,, Departments, County Hospitals ... ..	16		
,, Hospital, Bushey Heath ... ..	v		
Measles ... ..	24		







